A PRELIMINARY INVESTIGATION INTO THE PERFORMANCE OF ETHICAL INVESTMENT FUNDS

by

Laura Halton

A thesis submitted in partial fulfilment of the requirements for the degree of

Master of Business Science

University of Cape Town

1996

The financial assistance of the Centre for Science Development (HSRC, South Africa) towards this research is hereby acknowledged. Opinions expressed are those of the author, and are not necessarily to be attributed to the Centre for Science Development.

University of Cape Town

ABSTRACT

A PRELIMINARY INVESTIGATION INTO THE PERFORMANCE OF ETHICAL INVESTMENT FUNDS

by Laura Halton

A common argument against ethical investment is that it earns lower returns than conventional portfolios and is thus contrary to the fiduciary responsibility of fund trustees. The theoretical base for this assertion is that ethical investment reduces the investment universe. Little, if any, importance has been attached to the financial performance of socially responsible firms, and whether superior performance negates the reduction in investment possibilities. This study shows that ethical funds do not necessarily underperform, and in fact, in many cases have outperformed similar conventional funds. The criteria applied by these funds are examined and some economic justifications for the success of such funds are suggested. Successful funds could form the basis for RDP targetted investments in South Africa.

TABLE OF CONTENTS

LIST OF FIGURES

ACKNOWLEDGMENTS

The author wishes to thank Trudi Hartzenberg and Tony Leiman for their supervision of this mini-thesis. Assistance in gathering data on foreign funds was received from Nick Smith (University of Kent), Craig Van Holzen (First Affirmative Financial Network), Steve Lydenberg (Kinder, Lydenberg and Domini), Margaret Hutchins (Citizens Trust), William Paris (Socially Responsible Business Discussion Group) and the Calvert Group (USA).

GLOSSARY AND ABBREVIATIONS

APT : Arbitrage Pricing Theory.

CAPM : Capital Asset pricing Model.

CDLF : Community Development Loan Funds.

CGF : Community Growth Fund.

COSATU : Confederation of South African Trade Unions.

IDU : Investment Development Unit, part of the LOA.

JSE : Johannesburg Stock Exchange.

LOA : Life Offices Association.

LRS : Labour Research Service.

Mutual Funds : the United States term for unit trusts.

NYSE : New York Stock Exchange.

PA : prescribed assets. South African retirement funds were required by law to invest a certain percentage of the book value of their assets in prescribed assets such as Government bonds. Prescribed assets were replaced in 1989 by Prudential Investment Guidelines.

RDP : Reconstruction and Development Programme.

S & P 500 : Standard and Poor 500, an index of the 500 largest US companies, as rated by Standard and Poor.

SBDC : Small Business Development Corporation.

SDI : socially desirable investment.

Sullivan Code : a standard against which the business practices of US firms operating in South Africa were judged, with particular reference to the treatment of black employees.

Withdrawal Benefit : the benefit to which retirement fund member is entitled should they withdraw voluntarily from the fund.

Chapter One

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

Ethical investing began with the "Friendly Societies", and with Church groups who wanted to invest their money in accordance with their religious principles. Such funds became more popular in the eighties as a stand against apartheid South Africa and other oppressive Governments. They provided a means to vote on social issues. The social agendas of these funds have since broadened, and are increasingly focused on issues related to sustainable development, and the efficient use of society's scarce resources. Increasing public awareness of the scarcity of resources, and the effects of consumption and production decisions on those resources, coupled with increasing concerns about the welfare of burgeoning populations, have pushed ethical investing further into the spotlight. Ethical investment remains outside of the mainstream, however, dogged by the stigma of earning inferior returns.

> "The use of social responsibility criteria in the management of institutional portfolios is receiving an increasing amount of attention in the financial press and among policy makers....are the standards of fiduciary responsibility breached by undertaking investments which are not for the exclusive benefit of the beneficiaries? Is it ethically desirable to subvert the investment process by decisions which will require blacklists of companies" (Rudd, 1981, p 55).

Rudd's question is pertinent - is ethical investment economically justifiable or simply politically motivated? Equally pertinent however, is the question of whether ethical investment does indeed "subvert" the investment process or in fact add a further dimension. Furthermore, an exclusive focus on returns as a measure of the investors benefit or utility does not take into account non-monetary components of utility functions, an omission which is particularly relevant for ethical investors.

1.2 THE FUNDAMENTAL QUESTIONS TO BE ANSWERED

Investment practitioners, both in South Africa and internationally, have been reluctant to offer ethical portfolios, or to support the concept as they feel that ethical investments under-perform, and are thus prejudicial to the client. The central question, then, is do ethical portfolios offer below market rates of return? Closely related to this are the questions of how 'ethical' is defined and evaluated. There are no clear guidelines as to what constitutes ethical behaviour by a firm, and no widely accepted social auditing procedures.

1.3 AIMS OF THE STUDY

The aims of this study are twofold : firstly to show that ethical investing is not synonymous with below average returns, and secondly, to try to identify why this is so. Other factors which could contribute to the success or failure of a portfolio, such as the specific criteria adopted, portfolio structure and management, will be examined.

1.4 WHY STUDY THE PERFORMANCE OF ETHICAL PORTFOLIOS?

Although 'ethical investing' has been gaining popularity in Britain and the USA for several years, it has only recently gained momentum in South Africa. Pension funds in particular have been targeted, since they have large pools of highly visible funds and a long investment horizon, unlike other potential sponsors of social programmes. While advocates maintain that only pension funds have time horizons long enough to reap the returns on socially desirable projects, fund managers have often engaged the defence of 'fiduciary responsibility'. In the current political climate in South Africa, with the scramble for RDP-friendly projects, socially desirable investments are likely to gain ground, but there needs to be analysis of the impact in terms of risk, reward, diversification and investor utility to allow the weighing up of financial costs (to beneficiaries and firms) and perceived social benefits. The multiplier effects stemming from ethical investments need to be taken into account, as they are likely to feed back into improved long-term performance for both ethical and conventional portfolios.

1.5 OUTLINE OF THE STUDY

There is little agreement on the use of the terms 'social investment' or 'ethical investment' - the terms are very broad and have different interpretations. Ethical investing is different from the social responsibility spending undertaken by a number of firms and this distinction should be made clear. Clarity of definition will go a long way to resolving disagreements over the issue, and overcoming the reluctance of practitioners to use ethical portfolios. Therefore, this paper begins (chapter two) with an outline of the vast array of activities which have become ensconced under the banner of ethical investing. The majority of these are closely related to conventional portfolios, while others are more removed from the mainstream with consequences for their relative performance. The diversity of investment opportunities highlights the potential for ethical investing to contribute to desired social change.

Chapter three briefly reviews the theoretical base of investment techniques (particularly with regard to portfolio construction). Current investment practices stem from Modern Portfolio Theory (MPT), and in particular the Capital Asset Pricing Model (CAPM). MPT encompasses both the CAPM and Arbitrage Pricing Theory (APT) but APT is less widely used in practice (although it may be more appropriate as a model for ethical investing). Thus it is appropriate to review Modern Portfolio Theory and the implications for ethical investing, apriori. The essence of the Capital Asset Pricing Model is the relationship between expected return and diversifiable risk, and the valuation of assets. This model, developed in the 1960's by Sharpe and Lintner, uses historical securities prices to determine a relationship between a particular security and some benchmark, and then uses this relationship to predict future performance against the benchmark. Arbitrage Pricing Theory, which makes use of several factors, as opposed to only historical returns, to predict future price movements has gained prominence in academic circles, but not in the wider investment community. The APT is based on the simple notion that security prices adjust as investors form portfolios in search of arbitrage profits (Van Horne, 1986), but is more difficult to use than the CAPM.

Chapter four considers the findings of studies of ethical **mutual funds'** performance, predominantly in the US. Although the literature reviewed deals predominantly with disinvestment, the principles are applicable to all ethical investment. In fact, the ethical investment movement initially revolved around disinvestment from South Africa, with perhaps one or two other negative screens. These

studies highlight shortcomings in investment theory, and provide a backdrop for the case studies in chapter five.

In chapter five, data from the UK and the US is analysed in terms of the criteria applied, and the performance of ethical portfolios. The case studies show, as expected, that while the criteria adopted by ethical portfolios are very similar, their performances differ substantially. The case studies thus support the notion that it is other factors, common to both ethical and conventional portfolios, which account for differences in returns between portfolios.

Chapter six provides a summary of current ethical investment initiatives in South Africa, and examines how the lessons learned from international experiences can be applied to South African portfolios. Being able to construct profitable portfolios with an ethical bias will be a large step forward in providing private sector financing for the RDP, without reverting to legislated investments such as Prescribed Assets.

The final chapter presents conclusions, and recommendations for further study.

1.6 LIMITATIONS OF THE STUDY

Ethical investing is a relatively new field of research, and as such both the literature, and data suitable for analytical purposes, is sparse. Only four empirical studies of the returns to ethical investing were cited in the literature, and these studies are reviewed in chapter four.

Given the length of time ethical investing has taken place in the US and the UK, and the number of firms specialising in such funds, the paucity of reliable, consistent data on the historical performance of ethical mutual funds is surprising. Up to the minute data is available via the Internet (but only for the current day), but historical data is far more difficult to obtain. Most firms or information services supply only recent data, such as for the current day or week. The most common form of historical data available is one year, three year and five year returns, but the sources do not always state the dates used, and there does not seem to be a convention for such reporting. This makes comparisons difficult, as a one year return from September 25 to September 25 is obviously not the same as a return measured from September 30 to September 30, and given the volatility of the stock market, the differences can be marked. As different sources tend to use different dates, and a complete data set for all ethical mutual funds could not be compiled from one source, performance analysis had to

be restricted to very general observations and comments. Furthermore, although ethical investing has been practised on a small scale for decades, there are fewer than 10 currently available portfolios in the UK and the US which have been in existence for three years or more. Therefore, rigorous analysis of the performance of ethical portfolios was not possible, given the lack of data.

Time and financial constraints prevented in depth interviews being conducted with all the portfolio managers from whom data was requested.

Chapter Two

ETHICAL INVESTING : AN OVERVIEW

2.1 DEFINITION

A stumbling block to implementing ethical investments in South Africa has been the issue of definition. The distinction between 'socially desirable', 'socially responsible' and 'ethical' is fuzzy at best, and interpretations differ. Often the three terms are used interchangeably. This problem is not unique. There is not consensus in the US although ethical investment has been practised for 25 years and the industry is worth in excess of $650 billion. As mentioned above, ethical investing covers a range of activities and is broader than the social upliftment connotations attached to it in South Africa.

Ethical investment encompasses all investments which combine ethical (or social) and financial motivations. It includes the more conventional forms of investment such as unit trusts, and alternative forms such as the 'Shared Interest' and 'Out of this World' initiatives described below. The Ethical Investment Research Service in the UK defines ethical investment as "choosing investments that reflect your values"(Ethical Business Home Page, 1996). Ethical investment could be broadly defined as investment which generates positive externalities i.e. social as well as private returns, or which helps to reduce negative externalities. Managers of ethical portfolios use a number of social issues as 'screens' to determine the suitability of assets for inclusion in the portfolio. Positive screens would support positive externalities, for example companies actively pursuing policies of equal opportunities not only generate productivity gains for themselves, but help to reduce social tensions in the broader community. Similarly, negative screens help to reduce negative externalities. From here the focus can fall on socially desirable investment, which emphasises the type or size of externality and the group to which it accrues.

'Socially desirable' is difficult to quantify, as it will invariably depend on the definition of society chosen. For example, creating a city park could be considered to be socially desirable irrespective of whether it is located in a wealthy or poor neighbourhood, although the social

benefit may be larger in a poor neighbourhood. Leeman's(Leeman , 1992) definition of socially desirable investment is a subset of ethical investment[1]. In South Africa the tendency has been to focus on basics such as housing, education and health care for historically disadvantaged groups. This narrow focus has allowed fund managers to invoke fiduciary responsibility and poor returns as defences as the political environment and the culture of non-payment have made such investments high-risk, without offering large returns in compensation.

'Social responsibility' pertains more to the responsibility of companies toward their customers and employees, and usually takes the form of a donation rather than a return-generating investment. For example, the provision of study bursaries/loans to dependants of employees, or the sponsoring of a local crèche would form part of a firm's social responsibility budget, not an investment portfolio. The returns to such exercises are a more positive image in the community and related benefits. In 1991 the social responsibility spending by 70 large, South African companies amounted to R840 million (Leeman, 1992).

2.2 SCREENING CRITERIA

Both conventional and alternative ethical investment involve the application of screening criteria to potential investments or business activities. Initially screening tended to be negative, which meant avoiding companies involved in certain activities. Now, however, the emphasis is more on a combination of positive and negative criteria. Traditionally, negative criteria have included discrimination on the grounds of race, sex, religion or disability, repressive governments, armament manufacturers and distributors, animal testing/cruelty, human rights abuses, alcohol and tobacco production and any links to nuclear power. Positive criteria focus on equal opportunities, sound employment practices, community relations, natural resource conservation, community involvement, recycling and a sound environmental record. Amy Domini of Kinder, Lyndenburg and Domini, who maintain the Domini Social Index, thinks that screening is beginning to move beyond this :

> "Social screens are changing in two ways. We are becoming more sophisticated in our evaluation methodology, and we are adding new standards....and are moving beyond alcohol, tobacco, gambling, nuclear power and military weaponry and have

[1]Michael Leeman defined socially responsible investment as that which "generates economic benefits for socio-economically deprived communities and still provide a monetary return sufficient to attract investors voluntarily"

begun evaluating consumerism and the impact it has on society" (GreenMoney Journal, Fall 1995).

2.2.1 THE TOP EIGHT SCREENING CRITERIA

The broad social issues taken into account when constructing an ethical portfolio are remarkably similar both within and between the US and the UK. For example, the majority of portfolios use environmental issues as a screen, although the specifics differ between portfolios. In general the criteria applied make good business sense rather than being merely an expression of moral outrage.

The eight most common issues used by the seven portfolio managers for which this information was available are discussed below (Citizens Trust and the Calvert Group manage seven and five portfolios respectively, using criteria in these categories).

a) **Divestment or International Human Rights**

Seeing as most ethical portfolios began as anti-apartheid stances it is not surprising that all seven portfolios retain international human rights as a criterion. Over the past year, specific reference to South Africa has been removed from two of them, following its transition to a democratic state. The criterion refers generally to excluding from consideration companies which have operations in, or deal with, oppressive regimes. In addition to its moral standpoint, this criterion makes economic sense.

Disassociating with firms which operate or have dealings with oppressive regimes may have social objectives, but also reduces business risk. The negative public image of such companies should also not be ignored. Countries with oppressive governments are prone to civil strife such as uprisings, as evidenced by countries such as Rwanda, Zambia, Mozambique, Cuba and Nicaragua. Although these civil wars provide profitable opportunities for illegal arms trading, the general economy declines and companies will be forced to close.

Furthermore, association with such countries involves high political and currency risk. Fluctuations in the exchange rate affect not only the value of repatriated profit, but also the earning power of companies producing traded goods, or which rely on imported inputs. There is the risk of changes in exchange control regulations, expropriation of assets by the State, prejudicial taxation and other adverse changes in government policy.

Although such political and currency risks are part of any international investment, they are greatly heightened when dealing with countries likely to face sanctions or embargoes form the international community, and with high levels of political instability.

b) **Armaments**

All seven portfolios excluded manufacturers and distributors of armaments. Although a number of firms have made spectacular profits, particularly during WW II and the Vietnam War, and government contracts to supply military equipment are likely to continue to be large the weapons industry will face increasing pressure to scale down. Governments are signing non-proliferation treaties, long-standing enemies are entering into peace negotiations and stricter controls are being placed on private ownership of weapons. Anti-war sentiment is growing amongst the general public, and public protest is likely to force stronger government action against warring nations. Thus, although the arms industry is unlikely to face severe decreases in demand, its activities are likely to be forced 'underground', with shrinking opportunities for legitimate profit.

c) **Nuclear Power**

Six of the seven portfolios took a stand against the nuclear power industry, with the British funds imposing the strictest criteria. Nuclear power will continue to be investigated as an alternative energy source, but the bulk of anti-nuclear sentiment stems from its military applications. The turning tide of public, and even government opinion, was clear from the reaction to the recent nuclear testing undertaken by the French government. It should not be forgotten, however, that the 'space race' and the nuclear power industry have produced advances in technology, and products which have significantly altered the world economy. Many of these technological advances, such as in medicine and the development of the microchip, have improved social welfare and raised productivity. If attention is focused on the benefits of nuclear power rather than on its military capabilities, the industry has tremendous scope for growth, and could become ethically acceptable if it provides a safe alternative to non-renewable energy sources.

d) **Alcohol and Tobacco**

Six out of the seven portfolios excluded companies manufacturing or distributing alcohol and tobacco products. Governments, particularly in the developed nations, are imposing increasingly stringent regulations on the manufacture, distribution and advertising of

these products, which reduces company revenues. However, it is the inelasticity of demand for these products which makes them good candidates for tax increases, and which will allow producers to pass on increased costs to consumers. On the other hand, both in South Africa and abroad the areas where smoking is permitted are being continually reduced, and large sums of money are being spent on anti-smoking and anti-drinking campaigns. Thus, although such companies may currently earn large revenues, their long-term profitability is under pressure.

e) **The Environment**

Environmental and conservation concerns are addressed by five out of the seven portfolios. Environmental and conservation issues are increasingly in the spotlight with progressively tougher legislation being enacted. Pollution levels and by-products are being more carefully scrutinised and in many countries, particularly in the developed world, new manufacturing ventures need to produce an acceptable environmental impact assessment before production can begin. In addition to these costs, companies which are not environmentally aware bear the risk of potential disasters such as the Exxon Valdez incident, the Merriespruit slimes dam disaster, the AECI fire in Somerset West or the chemical exposure at Thor Chemicals in Cato Ridge. Such incidents damage not only profitability but a firms reputation, which can take many years to restore. Furthermore, business practices such as dumping hazardous waste are unlikely to be sustainable, making the firm a poor long-term investment. If a firm has to resort to such practices to remain profitable in the short run, it may be an indication of other difficulties within the firm.

The relocation of the Saldanha Steel Mill in the Western Cape, the drawn out discussions regarding development at St Lucia, and the ongoing attention focused on the Caltex Oil Refinery in Cape Town highlight the importance attached to environmental issues in South Africa. Furthermore, as regulations become stricter, companies which have been pro-active will incur lower costs in upgrading facilities and equipment to meet higher standards, and therefore represent a better long-term investment.

f) **Workplace Issues**

Again cited by five out of seven portfolios. Companies which build good employee and customer relations are less likely to suffer from industrial action and consumer boycotts.

Particularly in South Africa with the strength of the Trade Union movement companies with effective equal opportunity policies, sound negotiating processes and a positive image with employees are going to offer better investment prospects. Millions of rands, and hundreds of production man-hours, are lost annually in South Africa through industrial disputes.

g) **Community Involvement**

Good corporate citizenship was stressed by five of the seven portfolios. Companies with a positive image in the community from which it draws its labour, and to which it sells its products have a higher chance of success than companies which do not.

h) **Animal Rights**

Included by only four of the seven portfolios, this criterion is probably the least economically justifiable. It is also difficult to apply, since many products which claim to be not tested on animals, while not tested in finished form, include ingredients initially tested on animals. However, the decline in the fur industry shows that the economic might of the animal rights movement should not be discounted. The increasing number of products which claim to be animal-friendly (whether they are or not) further demonstrates the inroads made by the animal rights lobby. An increase in consumer demand for animal-friendly products will obviously decrease the profits of companies which do not make this claim.

Cedd Moses, fund manager of Calvert's Social Growth Fund, feels that focusing on growth companies predisposes the fund to be ethical, since these young, fast growing companies "are inherently progressive and have a good corporate culture" (GreenMoney, Fall 1995). This is over-generalising, since ethical behaviour often entails sacrificing some profit, and although growth companies tend to offer greater flexibility and strong management, the quest for growth might induce the firm to sacrifice ethical principles rather than profit.

2.3 GROWTH IN ETHICAL INVESTING

Approximately 50% of the 1000 largest publicly traded companies in the US meet the socially responsible screening criteria of most mutual funds. The Domini Social Index, which

contains 400 ethically acceptable companies, has 255 companies in the Standard and Poor 500. The Citizens Index monitors 300 acceptable companies. By comparison, in the UK, it is estimated that only 20% of the FT-SE Top 100 is ethically acceptable (Holden Meehan, 1995). Larger investors, including the larger ethical funds, are also gaining the ability to pressurise companies into improving their business practices to become more ethically acceptable. What was once regarded as an extreme fringe view is rapidly gaining acceptance. "Although their aims and methods differ, nobody doubts the financial clout of ethical investors. The Social Investment Forum,...estimates that in America some $650 billion - or almost a tenth of total American investments - is now managed according to ethical guidelines" (The Economist, 76).

Today most direct ethical investing in the US is undertaken by wealthy individuals, charities and pension funds. Smaller ethical investors opt for mutual funds, of which there are an estimated 33 funds with total assets of $2.5 billion (Ibid.). It is a rapidly growing sector, with one third of the funds being launched in 1994. The largest ethical fund in the US stands at $510.3 million. Despite having begun in Britain ten years ago, the largest British fund ranks number nine world-wide at $ 76.7 million. The industry in Britain stands at about 800 million pounds (Ibid).

In the US and the UK it is possible to obtain a wide range of financial services (such as pension funds, mortgages, life assurance, savings accounts, tax planning and stockbroking) which utilise ethically screened funds. The Friends Provident Stewardship Fund was the first British ethical fund, launched in 1983. There are now approximately 30 ethical funds available worth more than 800 million pounds, although this is still small compared to the size of the market.

2.4 ETHICAL BEHAVIOUR AND COMPANY PERFORMANCE

Investment theory concentrates on equilibrium pricing of securities and the size of the investment universe from which a portfolio can be drawn. The CAPM postulates that all available information is reflected in security prices, so that in equilibrium a company with superior performance will command a higher share price. This in turn implies that higher expectations of future performance will raise a firm's price earnings ratio. The effect of expectations on share prices is important when considering a firm's ethical reputation. For

example, if a firm is prosecuted for breaching environmental regulations, or receives considerable negative press coverage, it will take time, and money, to restore investor confidence in the firm.

Theory goes on to say that reducing the investment universe reduces investment choices, resulting in poorer performance. Theory does not, however, take cognisance of the performance of firms included in the reduced investment universe. If, for example, the full universe contains one hundred companies, and the reduced universe only sixty, if those sixty are the sixty top performers, portfolio returns are likely to be minimally effected by the size of the universe. Herremans, Akathaporn and McInnes (1993) showed that large US manufacturing firms with good social responsibility reputations outperformed those with poor reputations between 1982 and 1987, and provided investors with higher stock market returns and lower risk. Furthermore, the abnormal returns earned by responsible firms were magnified for firms in industries characterised by high levels of conflict over social concerns (such as chemicals, armaments etc.) which are precisely the industries targeted by ethical funds. It also tends to be firms with ageing assets, and marginal profitability which resort to unethical practices in order to survive. Such companies are unlikely to represent a good, long-term investment prospect. Responsible companies should exhibit steadier performance, and, therefore, lower systematic risk.

2.5 EVALUATION OF ETHICAL BEHAVIOUR

However, social screens and their effectiveness can only be as good as the information on which the compliance of firms can be judged. The accounting profession has, thus far, failed to provide comprehensive records of the full impact of a firm on society (Herremans, Akathaporn and McInnes, 1993). In the absence of legislation, social reporting is haphazard and scant at best. "Although the reporting of social information has not progressed, the use of social information in investment decisions is growing" (Rockness and Williams, 1988 p398). This poses a problem, since it means investment decisions are being based on incomplete information which is often subjective.

In their in-depth study of eight ethical funds, Rockness and Williams found that the majority of funds applied a conjunctive model (i.e. firms must exceed a minimum requirement on each criteria to be included) and most obtained social information from the companies themselves

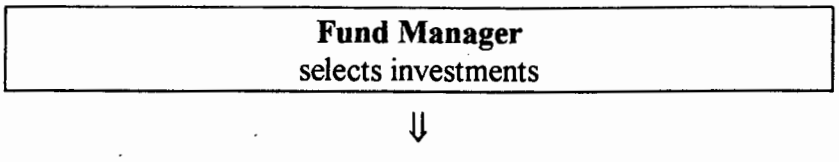
or from government agencies. All the funds concurred that there were few widely published sources of such information. Although large corporations in South Africa are currently emphasising their social responsibility programmes, objective social performance data is hard to come by. In addition, a firm could direct a small portion of its budget to socially responsible projects in order to hide substantive unethical behaviour. For example a company could be dumping hazardous waste in order to cut costs, but be diverting half a percent of these 'ill-gotten gains' to a responsible project. The firm would obviously promote its involvement with the responsible project, but a comprehensive social audit would be necessary to uncover the dumping. Clearly, the issue of what constitutes ethical behaviour is complex, as even broad guidelines have not been agreed upon.

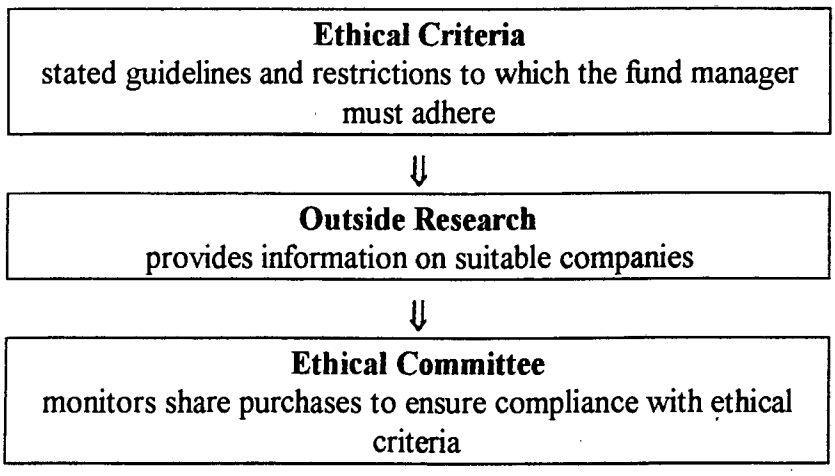
2.6 CONVENTIONAL ETHICAL FUNDS

Although a number of ethical investment vehicles exist, the majority of conventional ethical investment occurs through unit trusts (known as mutual funds in the US). Ethical unit trusts differ from non-ethical trusts in the type of selection criteria employed. Whereas a non-ethical fund will consider only the focus of the particular fund, and financial return, an ethical trust invokes a second selection stage. Once financially sound companies have been identified a set of ethical criteria is used to screen out companies whose practices are considered detrimental to the environment or the community, and to seek companies which are considered to be generating positive externalities.

The criteria employed by various funds tend to differ in degree rather than focus, in that the broad categories are the same but the conditions stipulated within categories differ. Companies involved in oppressive regimes, nuclear power, arms, tobacco, alcohol, animal cruelty, gambling, pornography, discrimination and pollution are excluded. On the contrary, companies which seek to conserve natural resources, protect the environment, possess good track records of customer and employee relationships and which demonstrate a commitment to the community will be actively supported.

The basic structure of an ethical fund is as follows :





Source: Adapted from The Holden Meehan Ethical Investment Guide, 1995.

The majority of funds rely on outside research services to provide lists of suitable companies - there are a number of firms both in the UK and the US which continuously assess and report on ethical companies. In the UK, the bulk of ethical research and rating is performed by the Ethical Investment Research Service, an independent non-profit organisation, whereas in the US information is provided by brokers and specialist magazines such as the GreenMoney Journal.

The Ethical Committee meets regularly to ensure that the portfolio is periodically reviewed as excluded companies may 'reform' and become acceptable, while included companies may cease to meet the criteria. It is rare in the UK, but common practice in the US, for funds to engage in 'constructive dialogue' with the companies invested in. As pointed out in the Holden Meehan Ethical Investment Guide, "if the purpose of ethically screened investment is to bring about change, then it can only help that process to tell the companies concerned how you wish them to change". This ability to influence company policy is particularly important in South Africa where such investments are politically sensitive and the institutional investors are large enough to move the market.

2.7 ALTERNATIVE ETHICAL INVESTMENT

The ethical funds outlined above fall within the ambit of conventional investment. Two methods of funding community development in low-income communities, used in the US, are community loan funds and community credit unions. These services are closely related to the activities of conventional financial institutions, except they address the needs of consumers normally denied access to other financial resources. Investment in loan funds and credit unions must be direct, since they are not listed companies. Given their target market, loan

funds and credit unions are likely to offer low returns, which makes them suitable for only a 'high social impact' portion of a portfolio.

The lack of infrastructure and services in many low-income communities means that most income is spent outside of the community, which limits opportunities to develop an economic base within the community. Community development loan funds(CDLF's) act as intermediaries between investors and borrowers, but channel funds into community development projects such as non-profit or low cost housing initiatives, community based businesses and infrastructural development. A key component of their business is the provision of technical assistance to borrowers, a critical success factor in many of the projects funded and thus in the returns earned by investors.

Development funds draw their revenue from a variety of sources including socially-concerned individuals, institutions, foundations and some banks. Such funds attempt to spread risk by not concentrating their lending activities too narrowly, in terms of project type or geography. "While CDLF's have the mission of economic justice, they are just as interested in evaluating the financial feasibility of a proposed project and the ability of the borrower to pay back the loan" (National Association of Community Development Loan Funds,1996). Generally CDLF's will underwrite loans, so that the risk to investors is small. The funded project is also monitored continually. This involvement in the project through technical assistance and monitoring is a significant deviation from the practices of conventional lending institutions, and may help to explain the success of the loan funds in a market where other institutions have traditionally failed.

Credit unions are similar to loan funds and are quite widely used in South Africa, where they have recently become more formalised and launched an Association. Credit Unions, and in particular the 'stokvel' movement in South Africa have induced fierce competition between financial institutions for their accounts, since they control significant financial resources. "Community development credit unions are member owned and controlled nonprofit financial institutions that bring credit and financial services to people and communities with limited access to mainstream financial institutions" (National Federation of Community Development Credit Unions, USA). Funds are essentially provided by members for members, unlike loan

funds. Once a union is well established, however, it may look beyond the needs of it members to broader community projects.

Credit unions in the US specialise in small loans directly to individuals for home purchase and improvement, student loans, and small business loans. Most of these credit unions limit their activities to a specific geographical area - be that a neighbourhood, small town or municipality. As with loan funds, credit unions provide financial education and planning to members, and allow members to build a credit history. Thus credit unions perform a vital economic function by integrating people who operated only in the cash economy into the mainstream. However, "while the credit union will always seek to make good, appropriately secured, loans, its lending policies and priorities are driven by its mission.....this often means offering smaller, less profitable loans to members or concentrating on a particular type of loan" (National Federation of Community Development Credit Unions, USA, 1996).

Credit unions represent an investment opportunity, albeit at below market rates of return, provided that interest charges are levied on borrowers. In the less formal revolving credit associations interest is not usually charged, which makes them unsuitable for commercial investment. However, the importance of these associations in the South African context is that these resources can be mobilised for community development, and boosted by 'outside' funds.

There are other ethical investment opportunities which are further removed from the mainstream than those discussed above, and generally offer below market rates of return, or inordinately high levels of risk. The continued existence of these ventures lends credence to the notion that ethical investors derive utility from non-monetary factors, and are prepared to accept lower monetary returns in order to feel that they are 'doing good'. In fact, ethical investors are likely to derive greater utility from investing in a project or firm which offers lower monetary returns but a high ethical standard than from a project offering above average returns but which is engaged in unethical behaviour. Two such projects are briefly outlined below.

The Out of This World project (OOTW) in the UK aims to open a supermarket group, owned by its customers, which only sells ethically acceptable products. The goal of the group is to "offer products and services in the shops that do more good than harm and enable people to shop for a better world" (Ethical Business Home Page). The group is unlisted so investors

would have to invest directly in the project. The stores will offer a range of 2500 to 3000 products, with information on each available to customers at point of sale by passing the product over a bar-code scanner. Available information will include where and by whom the product was made, environmental information, a comprehensive list of ingredients and health issues for food products. Despite their estimate that only 2% of Britons are ethical shoppers, and the extra research costs involved, the Out of this World project raised sufficient capital to open its first store in November 1995.

Shared Interest channel savings to projects in the Third World which do not qualify for other financial assistance, or where local finance is too expensive. They focus on subsistence projects run by people who lack basic necessities. Lending criteria include that the enterprise:

- be run for the benefit of groups of disadvantaged producers, especially women
- play a responsible role within its community and respects the environment
- use the loan profitably and have the potential to raise its own finance in the long run
- have a co-operative structure which empowers its members and foster participation

Shared Interest is effectively a co-operative lending society, where the investors are the shareholders. Shared Interest operates two schemes. The first is a share account which operates in much the same way as a building society account, including the payment of annual interest and withdrawal by return of post. Shared Interest does not provide loans directly to beneficiaries, but works through local credit organisations or Alternative Trading Organisations. These partnerships provide necessary local expertise, allow more effective evaluation and monitoring of projects and achieve a spread of projects to reduce risk. While this may seem a fairly conventional investment vehicle Shared Interest point out that "in a society, including a building society, the members bear the risk of loss. If the society makes net losses, these can be deducted from members' share accounts .....The directors have the power to suspend the withdrawal of money at any time" (Shared Interest,1995). They do, however, also point out that the spread of loans and the reserve account cover the expected probability of loss, so that only in exceptional circumstances will members accounts be raided. Shared Interest admits that the producers they support have no collateral which can be redeemed if the producers default, and cite a project that has indeed failed.

The second option offered by Shared Interest is a five year bond, which repays the principal at the end of five years, but no interest whatsoever is payable over the period. The scheme was launched in 1995 and to date has raised over 6 million pounds.

2.8 THE WAY FORWARD

George Gay, Chief Operating Officer of the First Affirmative Financial Network in the USA foresees the ethical movement as gaining in strength "[a]s Baby Boomers(which includes the largest number of social investors) continue to age, issues of quality of life, intergenerational equity and social order will grow in importance. Investors will focus more on the environment, urban conditions, education, health care, social security and other more senior citizen oriented issues. The pro-active concept of SRI [*socially responsible investing]* will become more important to most investors than avoidance.....Since Government at all levels will have decreasing resources to cope with social concerns, both due to fiscal constraints and a more politically conservative electorate, the requirement for social change through the private sector will become more imperative. The concept of the corporation as a "good neighbour" participating in community and supporting other progressive concepts will become essential" (GreenMoney Journal, Fall 1995).

As conventional investment wisdom acknowledges the size and commitment of the ethical market, more firms will offer ethical funds and these will tend to become more specialised. Furthermore, as ethical funds become more diverse and more resources are allocated to the industry, "SRI's oldest bugaboo, that of inferior performance will finally be laid to rest. Performance within SRI will be recognised to be the same as in other sectors, i.e. dependent upon the quality ad resources of management, not inherent to the social screens involved" (GreenMoney Journal, Fall 1995). Just as adopting a growth or value view is accepted as a legitimate management style which does not limit the investment universe, so to will an ethical management style be accepted. Reporting procedures will need to be improved so that socially-conscious investors are kept informed about markets and the social impact of their investment, not simply their financial gains. The increase in social awareness and demand by consumers (and government regulation) for greater transparency from business should make ethical behaviour more profitable.

Chapter Three

THEORETICAL FOUNDATIONS

3.1 PORTFOLIO CHOICE UNDER UNCERTAINTY

Financial theory is based on the neo-classical concepts of optimisation and intertemporal choice. Rational economic agents aim to maximise their utility, which is derived from consumption. Any individual faces a basic choice in consumption - either to consume now or later. Those who opt to defer their consumption are rewarded by some form of 'interest'.. Thus the aim of the individual is to decide how much to consume now, while remaining within the budget constraint:

Maximise $U(x^0, x^1)$
subject to $B = P^0x^0 + P^1x^1(1/1+r)$

where U represents utility, B the budget, P are prices, r the rate of return, x goods and services and the superscripts denote time periods.

To find the optimum consumption-savings pattern for an individual, the budget constraint is superimposed on their indifference map. The slope of the indifference curves are determined by the rate of time preference, that is the rate at which the individual is prepared to substitute future for present consumption. This time preference is measured by the marginal rate of substitution (MRS) between present and future consumption:

$MRS = - \delta x^1/\delta x^0$

For the individual to maximise utility subject to the budget constraint, the slope of the indifference curve must equal the slope of the budget line. This point is shown graphically in figure 3.1 below. Thus in equilibrium, MRS = 1+r. This shows that the rate at which people save is determined by the rate of return only. This derivation has not taken into account the nature of the utility function, and that it could, in fact, be made to incorporate non-monetary preferences.

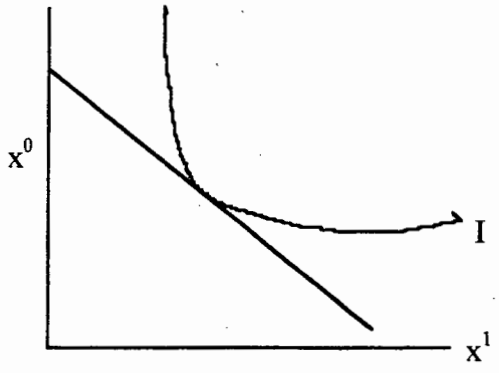


Figure 3.1 : Optimal Consumption Saving Choice

People may choose to save in a number of ways, for example through a bank account, by purchasing property or some other durable asset, or through the stock market. Given that the returns on each of these is uncertain, the decision as to which to choose involves the comparison of expected returns and associated risk.

For simplicity let us assume that the investor has initial wealth w^0 and has only two choices, holding cash with certain return 1+r or an asset with uncertain, or risky, return (1+r+x) where x represents the capital gains or losses of the risky asset. If the investor holds proportion b of initial wealth in the risky asset and w^0 is taken to equal 1, the total expected return on the portfolio is :

$R = (1+r)(1-b) + (1+r+x)b$ which reduces to $R = (1+r) + bx$

Since it is the only source of uncertainty, the expected total return depends on the size of x : $E(R) = (1 + r) + bE(x)$. If returns are normally distributed, the best estimate of x will be its mean value. A rational agent is seeking to maximise the utility derived from this return. Utility is a function of wealth at the end of the period w^T, which itself is a function of initial wealth w^0 , the expected return earned on that wealth, r and the probability of that return being realised. Thus the expected utility of the return[2] is:

$U(R) = E[u((1+i) +bx)]$

[2] $E(U) = \sum P_i U(R_i)$ where P_i is the probability of R_i occurring and $U(R_i)$ is the utility derived from R_i

Clearly, only if the form of the utility function and the distribution of x are known can the optimal portfolio for any investor be calculated. However, if an increasing and concave utility function is assumed (consistent with a risk averter), and utility is indeed a function of wealth, then expected utility will depend solely on the mean and variance of portfolio returns[3]. The mean-variance approach is not the only approach to portfolio choice, but it is fairly straightforward to use and yields neat results, so is very popular. The approach rests on two basic assumptions :

a) Nonsatiation - a basic assumption of neo-classical microeconomics. In this context it states that the investor always prefers more wealth to less. This implies that the investor's utility function is a positive, monotonic function of wealth.

b) Risk aversion - which means that if presented with a gamble where there is an equal probability of equal gain or loss, the investor will refuse the gamble. Implicit in this assumption is a utility function concave to the wealth axis, since this would mean the loss in utility from losing exceeds the gain in utility from winning, causing the investor to reject the gamble. Investors should also have decreasing absolute risk aversion, which simply means that the larger initial wealth, the more likely the investor is to take the gamble because a given rand return is a smaller proportion of initial wealth.

These two assumptions are shown in figure 3.2 below. W^0 represents wealth at the beginning of the period. The investor is offered a gamble of winning or losing x with equal probability. Thus wealth at the end of the period, w^T, is either w^0+x or w^0-x. It is clear that the expected utility of the gamble is less than the utility of keeping w^0, since the potential gain is smaller than the potential loss.

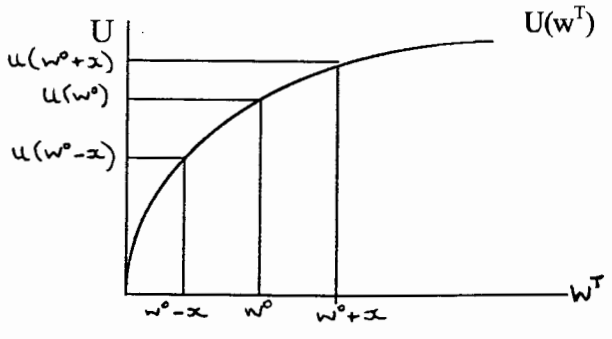


Figure 3.2 : Nonsatiation and Risk Aversion

[3] See McKenna (date unknown) , Alexander and Francis (1986) or any introductory finance text for a proof.

The mean-variance approach sketched above is only applicable when the utility function is quadratic, or portfolio returns are normally distributed. It can be shown, however, that a quadratic utility function violates the nonsatiation assumption, which means that the mean-variance approach can only be utilised if returns are assumed to be normally distributed, which is by no means a forgone conclusion. Logarithmic or power utility functions are suitable forms, and also display the property that wealth and returns are separable, so that the optimal portfolio selected will become independent of initial wealth (Alexander and Francis, 1986).

Indifference curves can be derived from the utility function to represent the investor's preferences for risk and return. When plotted in risk return space they will be upward sloping, the slope indicating the investors degree of risk aversion. The steeper the slope the more risk averse the investor.[4] These indifference curves can be superimposed on feasible portfolios to identify an optimal portfolio for a particular investor.

3.2 MODERN PORTFOLIO THEORY

Modern Portfolio Theory is based on the principle of 'certain uncertainty'" (Frost and Hager, 1987). It originated in the 1950's and incorporates the Efficient Markets Theory and the Capital Asset Pricing Model (CAPM). MPT involves identifying the properties of portfolios from the underlying assets, delineating the characteristics which make one portfolio preferable to another and constructing the optimal portfolio.

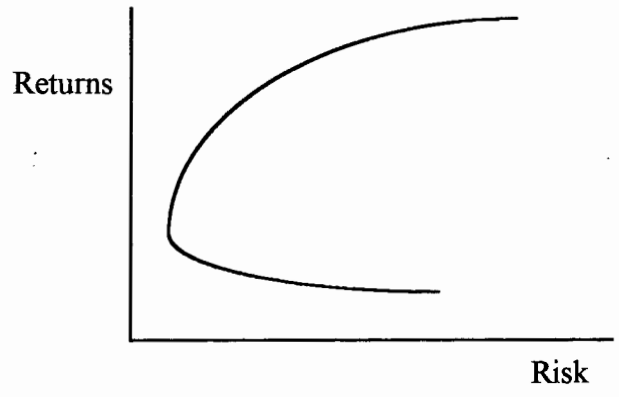
3.2.1 THE MARKOWITZ METHOD

Markowitz revolutionised finance theory in 1952 when he published the beginnings of MPT, by introducing a measurable concept of risk. He suggested that the objective is to construct a portfolio which minimises the standard deviation (of returns) subject to a desired level of return. He devised an algorithm, using elementary statistical techniques, to calculate such portfolios. All possible portfolios (all feasible combinations of available investments) are then plotted in risk - return space. Efficient portfolios are defined as those offering the highest return for a given level of risk. The line connecting all such efficient portfolios is known as the mean-variance efficient frontier, as shown in the diagram below. Standard economic

[4] A risk neutral investor will have horizontal indifference curves, and a risk-seeker will have curves which are downward sloping.

optimisation reveals that the optimal portfolio for any investor will be where his or her indifference curve is tangential to the efficient frontier.

Figure 3.3 : The Mean-Variance Efficient Frontier



Markowitz's algorithm does not assume that all investors hold the same beliefs, or, in contrast to the CAPM, that 'the market' will be one of the portfolios in the efficient set (Frost and Hager, 1987, p133). It simply takes the beliefs of the investor as given and traces out the mean-variance efficient set. Computational problems render the Markowitz algorithm impractical, thus the CAPM is more widely used.

3.2.2 THE CAPITAL ASSET PRICING MODEL

The CAPM is based on the following assumptions (Adams, 1989, p291):

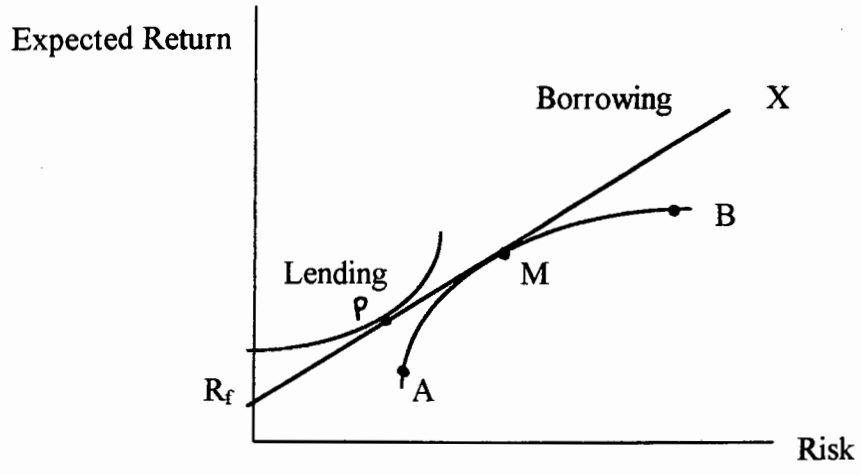
1) All investors are risk averse and measure risk in terms of variability in returns.
2) All investors have a common one period time horizon.
3) All investors have identical subjective estimates of future returns and risk for all assets.
4) A risk-free asset exists, of which investors may borrow or lend unlimited amounts.
5) All assets are divisible, there are no transactions costs or taxes and no restrictions on short selling.
6) Asset returns are normally distributed.

The assumption that asset returns are normally distributed[5] allows the expected rate of return to be measured by the mean, and risk by the standard deviation.

[5]Asset returns over short periods of up to 3 months, and the compounded returns on the portfolio over longer periods are assumed normally distributed. (Frost and Hager, 1987).

The first stage is to define the 'opportunity set' or choices available to the investor. As with Markowitz, efficient portfolios are plotted in risk return space and a boundary of efficient asset combinations drawn. In figure 3.4 below point A is the minimum variance portfolio, and B the portfolio with the highest expected return. The arc between them is the efficient frontier - any portfolio not on this segment has lower expected return for any level of risk. If short sales are permitted, the line can be extended past B.

Figure 3.4 : The CAPM



Source : Adapted from Frost and Hager,1987, p139

The CAPM reduces the computational complexity of the Markowitz model by introducing an index against which returns can be measured. The 'index' used in the CAPM is known as the market portfolio and consists of all risky assets[6] in the market held in proportion to their market value. The covariance of an asset's returns with the "market" return is measured by beta, and is used in the CAPM to indicate risk. A positive beta indicates that the returns on the asset move in the same direction as the market . Conversely, assets with a negative beta move in the opposite direction. If an asset has a beta between +1 and -1, the returns on that asset are less variable than returns on the market. Assets with beta>1 are more volatile than the market, and are thus considered to be more risky than the market.

The CAPM also introduces a risk-free asset which has a small, positive return. The inclusion of this asset creates a new efficient frontier, as shown by the line R_f-M-X in diagram 2.4

[6]Normally taken as financial assets but which should include stamps, antiques etc.

above. The line connecting the return on the risk-free asset, R_f, and the market portfolio, M, is known as the Capital Market Line (CML). This line is the combination of risky portfolios and the risk-free asset which offer the highest return per unit of risk. Since the market portfolio, M, dominates all other risky portfolios in that it offers the highest reward per unit of risk, every investor's optimal portfolio will be formed from a combination of the market portfolio and the risk free asset (Blake, date unknown, p290; Frost and Hager, 1987, p 140). By borrowing at the risk free rate and investing further in the risky portfolio, returns (as well as risk) can be increased. The particular position chosen on the CML (the new efficient frontier) depends on the investors risk tolerance. As before, tangency between the efficient frontier and the indifference curve of the investor determines the optimal portfolio. In figure 2.4 this would be portfolio P.

Despite the importance of preferences in this model, the preference of an investor for certain social issues is not taken into account. Individual attitudes to risk will be the sole determinant of that investor's location on the CML i.e. how much is borrowed or lent at the risk-free rate. Very risk averse investors will prefer to hold a large proportion of their portfolio in the risk-free asset, which means they will be lenders. More risk tolerant investors will borrow at the risk-free rate in order to be able to purchase more of the risky asset, M. As stated above, the CML dominates all other portfolios since any other portfolio offers lower return for the same amount of risk. Consequently, all investors choose to hold some proportion of portfolio M, regardless of their attitude to risk. The independence of investor risk preferences and the optimal risky portfolio is known as the Two Fund Separation Theorem.

Objections to ethical investing, based on the CAPM, have centred on the reduction in the investment universe which is assumed to lead to lower returns. Lower returns arise either directly, or because the restricted opportunities for diversification result in the inclusion of assets with high diversifiable risk which is not compensated for by higher returns. Therefore, further discussion of the CAPM will focus on these issues.

a) **Portfolio Returns in the CAPM**

Portfolio returns are a weighted average of the returns on the included assets i.e.

$R_p = \Sigma\theta_i R_i$, where

θ_i is the weight of asset 'i' in the portfolio, and

R_i is the return on asset 'i'.

Investors expect to earn a premium over the risk-free rate for holding risky assets, so that the return on a risky asset or portfolio becomes :

$$E(R_p) = R_f + \beta_p\{E(R_m) - R_f\}$$

where

$E(R_p)$ is the expected return on the portfolio or risky asset

R_f is the risk free rate

β_p is the beta or volatility of the asset or portfolio relative to the market, and

$E(R_m)$ is the expected return on the market.

This is the equation for the CML. The market price of risk is measured by the term on the right hand side.

b) **Portfolio Risk in the CAPM**

The variance, or risk, of the portfolio is given by : $\sigma^2_p = \Sigma\Sigma\theta_i\theta_j\sigma_i\sigma_j\rho_{ij}$

where

σ^2_p is the variance of the portfolio

θ_i and θ_j are the weights of assets i and j in the portfolio

σ_i and σ_j are the standard deviations of asset returns and

ρ_{ij} is the correlation between the returns on assets i and j (Blake, date unknown p 278).

In terms of the CAPM, the variance of returns for an asset is measured by $\sigma^2_i = \beta_i^2\sigma^2_m + \sigma^2_{ei}$ i.e. an asset's risk is composed of market risk ($\beta^2_i\sigma^2_m$) and residual, or unsystematic, risk. Unsystematic risk, or risk specific to the asset, can be diversified away and is therefore not rewarded by higher returns. Only systematic, or 'market', risk as measured by beta, is rewarded. Market risk is associated with socio-economic, political and other factors which can be expected to influence all assets.

The beta of a portfolio is the weighted average of the betas of individual shares held in the portfolio, where weights are equal to the market value proportions of the individual holdings. Empirical evidence in the UK suggests that while the betas of individual shares may change over time, those of diversified portfolios tend to remain reasonably stable. A study by Du Plessis (1974) found this to be true for the JSE as well. Given an upward trend in the market,

the high beta portfolios are expected to give high relative returns since they have more undiversifiable risk. In a falling market, however, high beta portfolios tend to underperform since they are more risky. (Adams, 1989, p290).

As the number of securities in a portfolio increases, total risk (unsystematic plus systematic) decreases, but at a decreasing rate. This occurs because it becomes progressively more difficult to add securities which are not positively correlated with other assets in the portfolio. Thus, highly diversified portfolios tend to be highly correlated with the market. It is widely accepted that institutional portfolios should be diversified, but an adequately diversified portfolio can be achieved with as few as seven carefully selected securities (Blake, date unknown).

Equilibrium in the capital market requires that prices equate demand and supply for each asset. This equilibrium requires that borrowing equals lending, and that all investors hold the market portfolio. All strategies other than this result in portfolios off the CML i.e. inefficient portfolios. If an asset lies above the CML it is undervalued in the market since it provides an excess return greater than that required for its associated risk. The attractiveness of the asset will increase demand, causing its price to rise until the expected return falls sufficiently for the asset to lie on the CML. The opposite adjustment occurs for overvalued assets.

Although several of the assumptions of the CAPM are unrealistic, evidence suggests that many of its predictions hold in reality. There are difficulties in testing the model - it is stated in terms of expectations rather than historic returns - but empirical tests suggest that high beta portfolios do in fact offer higher returns (see Adams, 1989, Gilbertson and Goldberg, 1981 and Du Plessis, 1974). The relationship between beta and returns also appears to be linear. Furthermore, ideas of MPT such as the risk-return trade-off, and that markets are efficient to some degree, are widely accepted in the investment fraternity, but few practitioners seem to formally apply MPT in constructing portfolios (Frost and Hager, 1987). Transactions costs and problems of dealing at fine prices in large volumes, particularly in the small South African market, has led most large institutional investors to adopt a long horizon with a core, strategic, portfolio held on a passive basis, and a smaller manageable portion being actively managed. By contrast, MPT focuses attention on whether it is possible to beat the averages

by active management and what constitutes an adequate spread of risk (Frost and Hager, 1987).

c) **Weaknesses of the CAPM**

- When the concept of risk as short term price variability was first developed, the US was experiencing economic stability in terms of taxes, interest rates and inflation, making it sensible to use such a measure (Blake, date unknown). However, in modern economies characterised by change this may no longer be an adequate measure of risk. Portfolio managers may be more concerned about the susceptibility of portfolios to changes in interest rates, Government policy or political factors than in short term price variations.
- The information age is also important, in that information spreads quickly and most funds are not dependent on the local market (unfortunately not so in South Africa). A risky strategy may be one which involves departing markedly from the main stream of competing managers (Frost and Hager, 1987, p 135). This has been cited by South African portfolio managers as a reason for their reluctance to develop ethical portfolios. One manager admitted to not wanting to be the first to launch a socially responsible fund, for fear of losing strategic advantage (personal interview).The tendency by the industry to focus on short term performance and the fact that MPT ideas often have not spread to clients reinforces this idea of risk.

d) **Extensions of the CAPM**

Although most of the assumptions of the CAPM are violated in the real world, the main conclusions are not significantly affected by relaxing some of these assumptions, as shown below.

The CAPM assumes only one risk-free rate, which is not the case in reality. If the borrowing rate is higher than the lending rate, the CML is no longer linear throughout. A line can be drawn tangent to the efficient set which will intersect the vertical axis at the higher borrowing rate. This line is shown by R_bX in figure 3.5 below. Thus the CML develops a curved portion between M and X. It can be shown that the CAPM holds even if there is no risk-free asset, by substituting a zero beta portfolio for the risk-free asset.

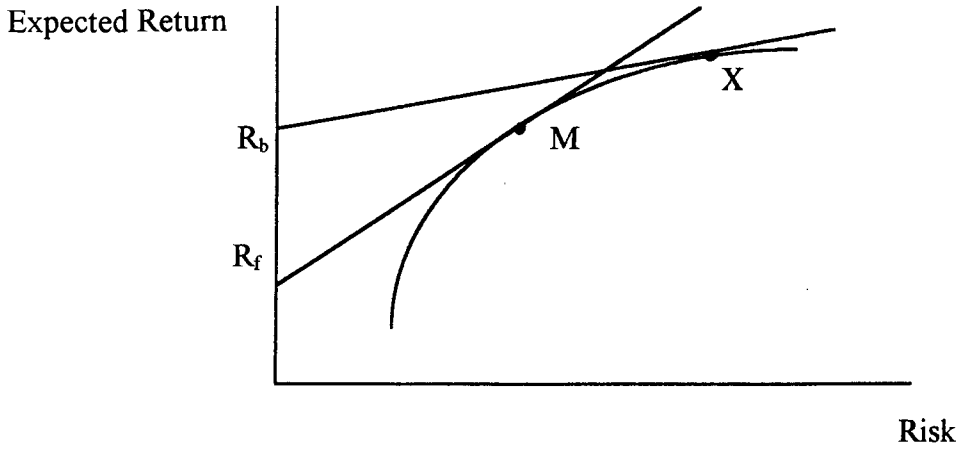
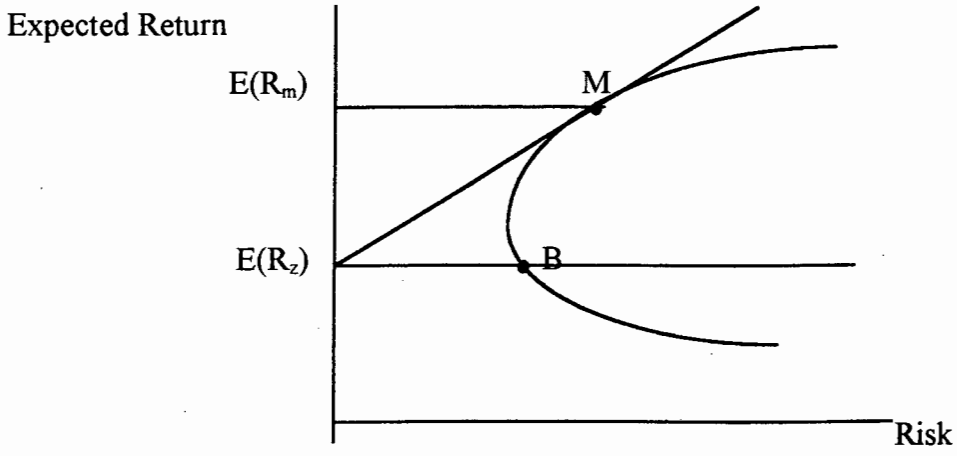


Figure 3.5 : The CAPM with Different Borrowing and Lending Rates

It is possible to identify portfolios that have zero covariance with the market portfolio but have the same risk i.e. a zero beta. There is only one such portfolio which lies on the efficient set. This portfolio is the minimum variance zero beta portfolio shown in diagram 3.6 below at point B. Mathematically, the slope of a line tangent to the efficient set at M and with return R_z (the return on the zero beta portfolio) can be calculated. The equation for this line is the same as that for the CML, with the return on the zero beta portfolio replacing the risk-free rate. Thus, the expected rate of return on any asset is a linear combination of the expected rate of return on two assets - the market portfolio and the unique, minimum variance zero-beta portfolio (Copeland and Western, 1983, p207). Thus, a risk free asset is not essential to the CAPM - beta remains an appropriate measure of risk and the model remains linear. However, this version of the CAPM requires that there be no restrictions on short selling.

Figure 3.6 : The CAPM with no Risk-free Asset



Source : Copeland and Western, 1983, p205

Secondly, not all assets are equally marketable. When investors are required to hold non-marketable assets in their portfolio that have risky returns R_u, the CAPM must take the following form (Copeland and Western, 1983, p210) :

$E(R_p) = R_f + \lambda[V_m COV(R_p,R_m) + COV(R_p,R_h)$

where

λ is the market price of risk : $E(R_m) - R_f/V_m\sigma^2_m + COV(R_mR_h)$

V_m is the current market value of marketable assets and

R_h the total return on all non-marketable assets.

In this version of the model, risk is composed of market variance and the covariance between returns on marketable and non-marketable assets. Now individuals can hold different risky portfolios since the risk associated with their non-marketable assets will differ. However, the Two Fund Separation Theorem still holds. The measure of risk is still beta, but covariance must be considered between each asset and two portfolios - one composed of marketable, and the other of non-marketable assets (Copeland and Western, 1983, p211). This effect is compounded in South Africa by the thinness of the JSE - if one of the large institutional investors sold off one particular share its price could collapse, rendering the large holdings of the institutions less marketable than normal.

The CAPM has also been shown to hold when investors have heterogeneous expectations and when taxes are introduced. If expectations are heterogeneous, investors will have different opportunity sets and their own capital market line. Lintner (as in Copeland and Western,

1983), and Van Horne (1986) have shown that, if heterogeneity in expectations is not extreme, the basic tenets of the CAPM still hold.

The introduction of transactions costs means that not all portfolios will lie on the CML but rather in narrow bands on either side of it, because the costs involved outweigh the advantages of transactions which would ensure the portfolio was efficient. Again, the presence of such bands does not negate the conclusions of the CAPM.

The model is affected if there is a differential between tax rates on capital gains and dividends. If the tax rate is higher on dividends, there will generally be a preference for capital gains. This implies that, keeping risk constant, high dividend shares will be required to provide a higher pre-tax return than non-dividend shares in order to offset the tax effect. This in turn implies that the expected return, before tax, becomes a function of both beta and dividend yield, which means that the CAPM becomes three dimensional as opposed to two dimensional. The predictions of the CAPM should not be affected by the increase in dimensions.

e) **Predictions for Ethical Investing**

1) Portfolios which do not lie on the CML are inefficient since they have a lower return per unit of risk. If any assets are excluded from consideration, the market portfolio cannot be attained, and the resulting portfolio cannot lie on the CML. Therefore, its returns are expected to be lower.

2) In even more basic terms, ethical portfolios can be expected to have lower returns. The returns on the portfolio are a weighted average of the returns of the included assets. Therefore, excluding assets automatically reduces return, unless the excluded assets had negative returns.

3) There is increased exposure to the risk of individual assets. Management issues, environmental awareness and so on of individual companies are more likely to affect the individual asset rather than the market. Thus responsible practices by firms should tend to reduce unsystematic rather than market risk, which is not rewarded by higher returns.

4) By excluding sectors or a number of firms within a sector, a degree of homogeneity between the remaining assets will exist. The reduced opportunities for diversification will increase the risk of the portfolio. However, as noted above, a relatively small number of

carefully selected securities can yield a well diversified portfolio provided that both positive and negative beta securities are available.

5) Ethical portfolios could be expected to perform well if there was a significant upturn in ethical consumption rather than ethical investing, or if government regulation becomes more stringent. If, for example, all consumers gave up smoking, tobacco companies would perform poorly and portfolios which excluded such shares would do better than those including such shares. The same effect would be noticed if the demand for "ethical" products rose, as might be expected among higher income groups.

3.2.3 ARBITRAGE PRICING THEORY

First formulated by Ross in 1976, Arbitrage Pricing Theory(APT) offers a testable alternative to the CAPM. The APT is more general in that it assumes that the rate of return on any security is a linear function of k factors (Copeland and Western, 1983) :

$R_i = E(R_i) + b_{i1}F_1 + \ldots\ldots\ldots + b_{ik}F_k + \varepsilon_i$

where

R_i = the rate of return on the i^{th} asset

$E(R_i)$ = the expected rate of return on the i^{th} asset

b_{ik}= the sensitivity/weighting of the i^{th} asset's returns to the k^{th} factor

F_k = the mean zero k^{th} factor common to the returns of all assets under consideration

ε_i = white noise term

Thus, the APT assumes that changing asset prices can be explained by the weighted average of changes in the underlying factors. The number of factors is limited[7], and no asset need correlate 100% with any particular factor. In the CAPM k is restricted to 1, which is beta.

The APT retains the assumptions of perfectly competitive and frictionless capital markets. Furthermore, investors are assumed to have homogenous expectations as to the returns and risk associated with each factor, and what the k factors are. However, investors have different preferences for the risks associated with each factor - for example a pension fund manager may be more concerned with the effects of inflation than the effects of increased production

---

[7] Empirical work by Roll and Ross suggests a maximum of 4. See "The Arbitrage Pricing Theory Approach to Strategic Portfolio Planning" Financial Analysts Journal 40, May/June 1984.

on returns. In addition to the restriction on the number of factors, they must be orthogonal i.e. the factors are not mutually correlated so that $\sigma_{ij} = 0$.

The most important feature of the APT is the presence of arbitrage portfolios (Copeland and Western, 1983). For each factor there exists an arbitrage portfolio whose returns are perfectly correlated with that factor. Every asset can be considered as part of an arbitrage portfolio. Arbitrage portfolios are simply portfolios that neither generate nor lose wealth, incur no risk, and, on average, earn no return. The requirement of using no wealth merely implies that some assets are sold to purchase others, so that the change in wealth is zero. It is possible to obtain a risk free arbitrage portfolio by ensuring that the percentage of wealth invested in the i^{th} asset remains small (i.e. $w_i \approx 1/n$), by diversifying across a wide range of assets (i.e. n is large) and choosing w_i so that for any factor k the weighted sum of the systematic risk components, b_k, is zero (i.e. $\sum w_i b_k = 0$ for each k) (Copeland and Western, 1983). In other words an arbitrage portfolio has zero beta in each factor. Thus the return on the arbitrage portfolio becomes $R_p = \sum w_i E(R_i) = 0$. If the return were not zero, an investor could conceivably achieve an infinite rate of return with no extra wealth and no risk (Copeland and Western, 1983).

The total expected return to a portfolio must be a linear combination of the return on the risk-free asset and the returns on each other asset weighted by their sensitivity to each factor. Thus, as with the CAPM expected return can be written in excess returns form :

$$E(R_p) - R_f = \lambda_1 b_{i1} + \ldots\ldots\ldots + \lambda_k b_{ik}$$

where R_p is the return on the portfolio, and λ_k is the risk premium associated with factor k, which can be seen as the excess return on an asset perfectly correlated with factor k and uncorrelated with any other factor[8]. A positive λ indicates aversion to the factor and a negative premium indicates value attached to the factor. This arbitrage pricing line is similar to the capital market line of the CAPM. In equilibrium, all assets must fall on the arbitrage pricing line. Combining assets $R_i = \sum b_{ij} R_j$,where b_{ij} is the weight of the jth factor in the ith portfolio, the arbitrage pricing line can then be rewritten as

$$E(R_p) = R_f + \sum [R_j - R_f] b_{ij}, \qquad j = 1 \text{ to } k$$

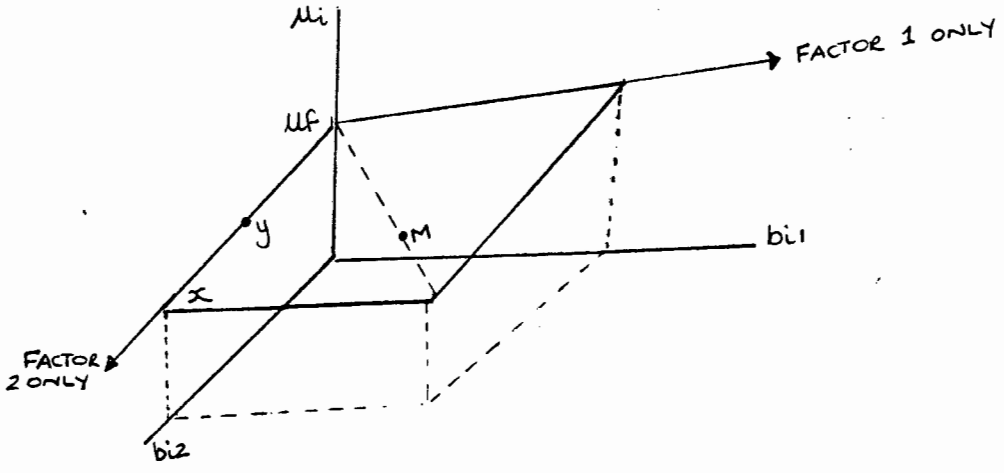
[8] $\lambda_k = R_k - R_f$, where R_k is the expected return on an asset perfectly correlated with factor k.

The term in square brackets is then the risk premium associated with factor j, and b_{ij} can intuitively be seen to be equivalent to beta in the capital market line. However, the equivalence holds only if the vector of returns have a joint normal distribution and the factors have vectors which are orthonormal (Copeland and Western, 1983).

Clearly, the APT is analogous to the CAPM but allows more factors to influence returns. In fact the CAPM is a special case of the APT. Despite their similarities, the APT has significant advantages over the CAPM (Copeland and Western, 1983):

- The APT is superior where investors are sensitive to more than one type of risk, because the CAPM is unidimensional in risk. The APT can show a number of portfolios with equal return to that of the efficient CAPM portfolio, but with different sensitivities to the risks of the underlying factors.
- Apart from non-satiation and risk aversion the APT makes no strong assumptions regarding individuals' utility functions, which is important for the study of ethical portfolios.
- In the APT the equilibrium returns of assets are dependent on more than one factor, whereas in the CAPM they depend only on beta. Copeland and Western, 1983 notes that " the ability of other variables such as price/earnings ratios to explain the portion of returns that are unexplained by the CAPM suggests that...the CAPM is misspecified and requires the addition of factors other than beta".
- The APT is testable because it is possible to use any subset of the universe of assets. Again this is a crucial property, when evaluating ethical portfolios.
- The market portfolio has no significant role to play in APT as opposed to its centrality to the CAPM.
- APT can be extended to a multi-period framework.

Figure 3.7 : Arbitrage Portfolios



In figure 3.7 two arbitrage portfolios are available. The risk-free asset is not correlated with any other asset. If the investor is allowed to sell short, then the entire plane becomes the opportunity set. The market portfolio of the CAPM must lie somewhere on this plane. The CAPM only allows purchase of the market or the risk-free asset whereas in APT the investor can locate anywhere on the plane, depending on their preferences for the underlying risks. In the diagram both x and y are perfectly correlated with factor 2 but y is less risky and therefore offers a lower return. Allowing short selling of the risk-free asset enables the investor to move to point z. It is not necessarily true that for any b if b_{ij} increases the return on the portfolio will increase - for example if the factor is inflation the investor may be prepared to accept a lower return than the risk-free rate in order to hedge against inflation.

a) **Problems with the APT**

In the CAPM the CML was derived by introducing utility and indifference curves. In the APT people can diversify risk, they need not buy the market. The problem is how to add multidimensional indifference curves to the diagram. There is no theory which allows the drawing of indifference curves in the APT diagram to indicate the optimum location on the plane.

Ethical issues will not be incorporated in the model as a 'factor' unless they are assumed to influence price. This is most likely if government is involved or if 'ethical' funds have some monopoly power, as is the case with South African institutional investors.

Chapter Four

LITERATURE REVIEW

Although maximising investment returns while maintaining an appropriate level of risk has long been the objective of portfolio management, ethical investors seek to include other objectives such as equal employment, environmental awareness and so on. While they may consider these additional objectives to be more important than profit maximisation, the basic concept is the same - the maximisation of utility.. Theory and "Intuition suggests that investment performance will be adversely affected, but a sound argument has not been forthcoming" (Rudd,1981, p55). "Critics of ethical investing argue that it tends to produce lower financial returns... because it is not driven by the goal of profit maximisation. Ethical investors, on the other hand, counter that they do better by backing firms which, because they act responsibly perform well over the long term" (The Economist, p77). In short, the evidence is inconclusive

4.1 SOCIALLY RESPONSIBLE CRITERIA

There is no consensus as to what the criteria for socially responsible investment should be, or what role such criteria are intended to play. Two widely used approaches are 'investment exclusion' (i.e. excluding certain companies with features or practices considered undesirable) and 'investment targeting'(focusing on companies or areas which are perceived as "good" as opposed to "not bad"). Both approaches have been applied in the studies reviewed, and in particular, divestment from portfolios of companies doing business in South Africa, Chile or other countries with disapproved of Governments[9]. With regard to divestment, two strategies can be identified : unqualified divestment - which affects all companies doing business in South Africa; and qualified divestment, which involves those companies not considered to be

[9]Other examples are exclusion of "sin" stocks such as liquor, tobacco and war related industries; exclusion of regulation violators; exclusion of non-union companies or competitors. Targeting includes concentration of investments in the local region; concentration on pro-union companies and the sponsor organisation or concentration of investment in the liabilities of the beneficiaries i.e. mortgages to plan participants (Rudd, 1981).

doing enough for blacks in South Africa. Qualified divestment typically involved companies not in the top two categories of the Sullivan Code compliance list.

Some commentators, including Rudd (1981), and Schotland (1980) question the legitimacy of such criteria at all in that they ignore the protection of the financial condition of the funds' beneficiaries. Yet exclusion and targeting have long been acceptable investment practices in 'conventional' portfolios. Schotland (1980) even objects to the use of the term "socially responsible", preferring "the term divergent investing, which avoids the implication that objections to such proposals are necessarily antisocial and irresponsible" (Schotland,1980, p29). He believes "that investing for retirement security is itself a socially responsible goal" (Ibid).

The central decision to be made by retirement fund trustees is the asset mix decision - i.e. the allocation of funds among asset categories so as to come closest to satisfying the liabilities as they fall due. A 'core' allocation is often chosen, with short term reallocations to take advantage of specific circumstances, averaging out over time. The impact of imposing socially desirable criteria needs to be measured against the core portfolio.

4.2 THE IMPACT ON RETURNS AND THE INVESTMENT UNIVERSE

The literature is surprisingly limited, and empirical studies even more so. Virtually no studies appear to have been conducted on actual pension funds. The most commonly referenced studies are by Rudd (1981), Wagner et al (1984), and Grossman and Sharpe (1986), which all focused on the effects of disinvestment from South Africa by US companies and used an index as their benchmark portfolio. Wagner et al (1984), and Rudd (1981) used the Standard and Poor 500 as a proxy for the market, while Grossman and Sharpe (1986) used the NYSE index, both of which are reasonable proxies for an institutional portfolio. Two investment universes are compared: that utilised in the absence of divestment and that selected with such a policy. Other studies reviewed are by Ennis and Parkhill (1986) using the S&P 500, and Hamilton et al (1993) using the NYSE.

According to Ennis and Parkhill (1986), 52% of the market capitalisation of the S&P 500 is accounted for by companies with South Africa connections. These companies also represent

the bulk of certain industry groups, such as 99% of industrial equipment and 97% of banks. Thus, unqualified divestment eliminates more than half the S&P 500 stock universe, including a number of entire sectors. Qualified divestment excludes from 13%(non signatories to the **Sullivan code**) to 32%(non signatories plus those not making good progress). Wagner et al (1984), estimate that if each of the South Africa related companies is replaced by the largest unrestricted company in the same industry, the alternative universe is less than 62% of the capitalised value of the S&P 500 . Large multinationals are replaced by small domestic firms, and the weights of some key sectors such as technology and capital goods are more than halved, with some being removed altogether. Replacement companies are unlikely to offer "the reduction in risk available from the size, financial strength, diversification of product line and dispersion of markets enjoyed by the large, international companies.....The challenge for restricted investment managers, then, is to construct from a reduced universe of smaller, generally riskier companies, portfolios that offer, at comparable risk levels, returns comparable to those offered by investments in large companies" (Wagner et al, 1984). Grossman and Sharpe (1986) argue that "divesting only the stocks of companies not complying with the Sullivan Principles results in the exclusion of a relatively small portion of the investment universe and has little effect on portfolio characteristics and returns[10]. A complete divestment policy....has more meaningful consequences".

Definition of the "market portfolio" is problematic. The CAPM assumes that a unique market portfolio exists, and is known. However, in practice the same benchmark, "market" portfolio may not necessarily be appropriate for both investment universes. If investors are indeed utility maximisers, one would expect that the average investor who wishes to divest will find that the optimal portfolio includes all South Africa-free stocks, each held in proportion to its outstanding market value i.e. the market portfolio for that universe. This takes into account the probability that the particular investor derives utility from being socially responsible. Rudd (1981) assumes that the market portfolio is unique, and consistent across universes when he claims that " Social responsibility criteria permanently bias the portfolio.... where the normal [core] portfolio is the market portfolio, social responsibility criteria always force the normal portfolio to be unobtainable" (Rudd,1981, p57) - as postulated by the CAPM.

---

[10]In 1984 the Investor Responsibility Research Centre listed South Africa related firms with a combined market value of $570 billion, or 37.1% of the total value on the NYSE. Sullivan non-compliance companies accounted for only 7.1% .

If one follows Rudd's interpretation, two scenarios are possible : If the fund (and others following the same criteria) is too small to dominate the economic environment (i.e. does not affect other capital market participants), the normal portfolio becomes unobtainable and the fund incurs more risk than in the absence of the socially responsible criteria, without a "commensurate increase in expected return because it arises solely from moving the portfolio away from its normal position. The increased risk is not the result of an active decision, but a damaging permanent bias" (Rudd,1981, p57).

If the fund is large enough to control a part of the market and thus cause changes to the external economy via its actions, the situation is different. Changes caused in the external environment may change the market portfolio itself, as postulated above and supported by Grossman and Sharpe (1986). This effect is particularly important in South Africa, where there are several institutional investors capable of influencing the market. The large volume purchases and sales that can be made by such investors will affect share prices, thus influencing the composition of the market portfolio.

4.3 PORTFOLIO PERFORMANCE

There are three possibilities regarding the performance of ethical portfolios :
1) The risk adjusted returns of socially responsible portfolios equal those of conventional portfolios. In this case, according to Hamilton et al (1993), the social responsibility feature is not priced - ethical investors wishing to sell always find sufficient willing buyers to prevent prices from dropping.
2) The expected returns on a socially responsible portfolio are lower than conventional portfolios. In this case socially responsible investors influence the market by driving down expected returns.
3) The expected returns on socially responsible portfolios is higher - the case of "doing well while doing good" (Hamilton et al (1993), p64). This requires that a large number of investors underestimate the negative information available about non responsible companies. The negative information eventually drives down share prices of the affected companies, but will not affect socially responsible portfolios.

As shown, divestment will severely restrict investment (diversification) opportunities. Thus, in the USA portfolio optimisation techniques could be used to construct portfolios without South Africa related securities with risk characteristics (statistically speaking) similar to those of a chosen index. As shown by Ennis and Parkhill (1986, p35) "In mid-1982 a manager could have constructed a South Africa free portfolio that, statistically, was not much riskier than the S&P 500. But such a portfolio would have excluded approximately 70% of the technology sector" which was the best performing sector over the period June 1982 to June 1993 producing returns in excess of 90%. In fact, the two sectors alone representing 33% of the S&P 500, and the two highest performing sectors would have been substantially ignored by a South Africa free portfolio.[11] Ennis and Parkhill conclude that "Where trustees act on their own accord, or on the basis of resolutions lacking the force of law, they may breach their fiduciary responsibility" by engaging in divestment.

Grossman and Sharpe (1986) used a factor model to estimate future results and examined the period from January 1960 to December 1983. Their explanatory variables included historical beta, dividend yield, size, economic sector and whether the stock was South Africa related or not (referred to as the South Africa factor). Over the period, on average, the South Africa regression coefficient was positive, suggesting that South Africa related stocks performed better than South Africa free stocks with similar characteristics. They found that "the risk-adjusted South Africa free portfolio outperformed the NYSE portfolio by 0.187% per year over the 1960-83 period" . This result was, however, not consistent - between 1960 and 1975 South Africa related stocks fared better, between 1976 and 1979 they performed equally well, and for the rest of the period South Africa related stocks performed worse. Although the underperformance in the 1980's was less statistically significant than the period of superior performance, its presence is sufficient to question whether South Africa related stocks have indeed substantially outperformed non-South Africa stocks with similar characteristics. Although the residual standard deviation of the South Africa-free portfolio was considerably higher than that of most index funds, Grossman and Sharpe (1986) estimated it to be lower than that of a typical actively managed portfolio.

---

[11]Economic sectors excluded in South Africa free portfolio by % of S&P were: Consumer non-durable/services 42%; Durables 61%; Technology 71%; Energy 35%;Basic Industry 45%.

Tepper (as in Hamilton et al (1993)) gives a brief report on the performance of 12 socially responsible mutual funds and found that they underperformed in five of the 6 years studied with a risk-adjusted cost of 1.9%. Rudd (1981) found that the effect of excluding companies with operations in South Africa is small, with an expected annual return 0.037% lower than that on the S&P 500.

Hamilton et al (1993) examined monthly returns from January 1981 to December 1990, with the NYSE as the market proxy. The number of socially responsible funds increased from 6 in 1981 to 32 by the end of the period. The period was split into two sections, 1981-1985 and 1985-90. The excess returns were measured using Jensens adaptation of the CAPM [12]. Of the 17 funds registered before 1985, 15 had excess returns over the market not significantly different from zero. The remaining two funds showed significant excess returns, but they were positive for one fund and negative for the other. On average the excess return for the 17 socially responsible mutual funds was "a loss of approximately ...0.76% per year" and the results for the post 1985 funds was "similar" (Hamilton et al,1993). Of the 17 funds, 5 had betas greater than 1 and a further 9 had betas greater than 0.85. Two had very low R^2's of 0.5 and 0.6, which indicates low diversification.

It should be borne in mind that, on average, returns earned by mutual funds trail broad stock indexes. Thus, socially responsible mutual funds could have low excess returns relative to the "market" index, but outperform conventional mutual funds. To test for this, Hamilton et al (1993) constructed a benchmark 'conventional' portfolio which excluded all socially responsible funds and was formed by drawing a random sample of conventional funds. The mean excess return of the conventional benchmark for the pre-1985 period was lower than, but not statistically different from, the mean for the corresponding group of 17 socially responsible mutual funds. The mean excess return of the post-1985 conventional benchmark was higher than, but not statistically different from, the mean excess return for the corresponding socially responsible funds (Hamilton et al, 1993, p66). This suggests that "Investors can expect to lose nothing by investing in socially responsible mutual funds". They do, however, concede that their estimates may be biased by two factors : the list from which

---

[12]Jensens adaptation is :$R_i - R_f = A_i + B_i(R_m - R_f) + e_i$, where
e_i is an error term,
R_i is the return on the asset and
R_f is the risk free rate.

data was drawn contains only 'live' funds, i.e. funds that exist when the list is compiled. Others may have existed during the sample period but closed before the list was drawn up. Thus the results may be subject to 'survivor' bias. Secondly, the substantial growth in socially responsible portfolios during the sample period may have inflated the returns of those that were in at the start.

The effects of exclusion policies are, thus reasonably clear. Increased demand for fewer securities will result in higher costs and prices - particularly for large funds which must buy large blocks to be diversified. If investors dispose of particular shares for ethical reasons only, their prices may be temporarily depressed. In the longer term, the market will be separated into those willing to hold these assets, and those not. If the ethical fringe is small, there may be sufficient other investors to hold the excluded shares and the net effect on the financial markets will be negligible (as for hypothesis 1 above).

If a substantial number of investors exclude the same asset there may be a more significant effect. In fact "Less high minded fund managers in New York and London have been surprised by the ability of what they regard as a lunatic fringe to move a share's price" (The Economist, p76). To induce investors in the first category to hold these assets, the market will increase the return per unit of risk. "The principle of portfolio optimality implies that an investor with no aversion to holding [particular] stocks will choose a mix....for which the marginal utilities of the two portfolios are the same" (Grossman and Sharpe, 1986, p26). If some investors choose to divest particular stocks, these must be purchased by 'neutral' investors. In equilibrium, neutral investors must be led - on purely economic grounds - to overweight their portfolios (in terms of market value proportions) with these "sin" stocks. In fact, the social responsibility criteria force the "undesirable" asset to become more financially desirable to non-ethical investors (as for hypothesis 2). By excluding certain stocks ethical investors are leaving them in the hands of those who are not driven by socially responsible criteria - those "who are looking to reap as much reward from sin as they can" (The Economist, p77). Increasingly, investors are looking to 'improve', rather than dump, firms through shareholder action.

Investment targeting is somewhat more complex, but tends to have similar outcomes to exclusion. It can, in fact, be considered a more stringent case of exclusion. Rudd (1981) feels

that both approaches bias the portfolio with a consequent deterioration in the long-run investment performance (Rudd,1981, p58).

4.4 DIVERSIFICATION AND RISK

Historical returns are an unreliable predictor of future returns, so comparing the returns of excluded assets versus other assets is necessary and intuitively appealing, but insufficient for comparing portfolios. "The only accurate method to estimate the cost of an investment policy is to measure the increase in risk that is incurred from its imposition" (Rudd,1981, p59).

In addition to beta, portfolio risk is indicated by its correlation coefficient, R^2 which indicates the degree of diversification as compared to the market benchmark. By definition the market has $R^2 = 1$, with values less than 1 indicating less diversification. Index funds tend to approach $R^2 = 1$, and active equity portfolios typically have $0.8 < R^2 < 0.9$. The alternative universe constructed by Wagner was well diversified, with $R^2 = 0.968$ - partly because of the high degree of correlation with the S&P 500. Wagner concluded that "The Alternative Universe has 8% more risk, as measured by beta, and 3% less diversification than the S&P 500" (Wagner et al, 1984, p14).

Rudd (1981) quotes from two studies, both of which used the Standard and Poor 500 to represent the normal portfolio. The aim of the studies was to find the restricted portfolio with the smallest possible bias relative to the market portfolio. Despite the excluded companies accounting for a substantial proportion of the market capitalisation, the increase in risk was small owing to a large number of acceptable substitute companies[13]. Thus it appears "that the increase in risk from this type of investment policy is not nearly as severe as would be predicted" although care should be taken not to generalise. Rudd (1981), on the other hand, did not reach similar conclusions regarding risk. With reference to his core 'normal' portfolio, he concluded that "Whenever the actual allocation is different from the normal allocation, the fund ...incurs additional risk. If the fund is efficiently managed, this additional risk will be compensated for by the additional return obtained from the active decisions." The only justification for moving from the normal allocation is when assets are 'momentarily' mis-

priced, else increased risk is not compensated (Rudd,1981, p57). Schotland (1980) concurs with Rudd : "Divergent investing is likely to be tried again and again until the lesson is overwhelmingly clear : The pension fund that diverges from exclusive concentration on performance performs less well than one that doesn't" (Schotland,1980, p29).

Grossman and Sharpe (1986) compared the full NYSE universe to the South Africa-free universe. They calculated beta for each firm using regression analysis and weighted those betas by market value to estimate portfolio beta. "The two universes had similar beta values, which suggests that divestment need not significantly affect systematic risk" (p17). The NYSE had a beta of 1.03 and that of the South Africa-free portfolio 1.05. Dividend yields were also marginally higher for the NYSE.

4.5 SMALL STOCK BIAS

Numerous studies have found size to be an important factor affecting returns. "Many studies of the small stock effect indicate that, on average, small stocks have outperformed otherwise similar large stocks over extensive periods of time" (Grossman and Sharpe, 1986, p25). There is little reason to assume that this will alter significantly in the future. Some researchers have noted that the average returns on South Africa related companies are significantly lower than returns on South Africa-free companies, which may result from the small stock effect. For example, Wagner calculated that $1 invested in 1979 would have grown over the sample period to $1.94 in a South Africa-related portfolio, and $2.60 in a South Africa-free portfolio - a difference in annual return of over 7%. Wilshire Associates estimate that the 500 largest US companies earned 9.7% p.a. between 1974 and 1984 compared to 17.9% for the second largest 500. "The higher return on the replacement portfolio may thus be a reflection of this small firm effect" (Wagner, p16). Unfortunately, high returns do not accrue without incurring greater investment risk - in the bear market from July 1983 to June 1984 the 500 largest stocks decreased 6.6% in value compared to 15% for the second 500 (Wagner, p16).

---

[13]The two studies estimated the increased risk to have a std deviation of 2-3 % p.a. This can be translated into the equivalent of a certain loss of 3- 7% for the average investor (Rudd, p60).

In the study by Grossman and Sharpe (1986) , the average firm in the South Africa free portfolio was nearly 30% smaller than those in the NYSE. There were two key differences between the portfolios they analysed:

1) the South Africa-free portfolio obviously excluded South Africa related stocks. Given the positive "South Africa factor" exclusion of these stocks worsened performance.

2) the South Africa-free portfolio had a small stock bias which greatly increased returns over the period. The net effect was positive since the small stock bias more than compensated for the South Africa factor.

Further, they show that if the small stock effect persists the South Africa-free portfolio will outperform the NYSE by approximately 0.358% even under conditions of maximum divestment. Thus, a portfolio excluding South Africa-related stocks, even after adjusting for risk, would outperform the NYSE and the majority of actively managed portfolios. It is not unreasonable to expect this to continue. Although South Africa-related stocks outperform otherwise similar South Africa-free stocks, the portfolios are not similar - the disinvestment results in a portfolio with a small stock bias which leads to superior performance. "Compared with a portfolio representing the overall stock universe, a representative; highly diversified South Africa-free strategy can provide a slightly higher expected return with the same risk but considerably less liquidity" (Grossman and Sharpe, 1986, p28). The small stock bias would seem to encourage investment in socially responsible, small and medium enterprises in the South African context.

4.6 COSTS AND IMPLEMENTATION PROBLEMS

There are two costs involved in introducing socially desirable criteria : initial costs incurred in transforming the portfolio (which includes research costs), and ongoing costs arising from the permanent bias introduced via reduced returns.

Initial costs arise from the brokerage and adverse market impact of buying and selling large blocks of shares in the case of large, institutional portfolios. The long run costs include increased transactions costs, increased management fees and increased risk. Increased transactions costs arise because the average liquidity of the assets decreases. Management becomes more complex as more research may be involved, which may lead to higher management fees being levied.

If divestment makes it impossible for the core portion of the portfolio to maintain its target characteristics, compensation may have to be made by requiring the 'growth' portion to take less risk, which implies a complete restructuring of the portfolio. Prohibited securities must be replaced with acceptable ones, with resulting cost implications. "Wells Fargo Investment Advisors have estimated that a $1 billion portfolio would incur a one time cost of 1.5% of assets, or $15 million" for unqualified divestment (Ennis and Parkhill, 1986, p 33). According to Grossman and Sharpe (1986), based on a buy and hold strategy of a market value weighted portfolio of all South Africa-free stocks on the NYSE, the initial transactions costs for a $1 billion portfolio "can be as low as 0.41% of the overall portfolio value". The estimate by Wagner et al (1984), 1984 was 6% of the amount divested for a $1 billion portfolio, or 2.28% of overall portfolio value. Wagner et al (1984) used brokers transaction cost estimates which are likely to be inflated, since brokers will want to insure themselves against information motivated, rather than ethically motivated, transactions. His estimates, therefore, reflect the cost of immediate, active trades, whereas divestment trades are not based on new information and can occur over a period of time. Furthermore, they assumed replacement of one equally weighted portfolio with another, which is not necessarily true in practice.

Grossman and Sharpe (1986) recalculated Wagners' transaction cost estimates and tried to decompose historical performance into that attributable to familiar financial variables and that attributable to investors attitudes towards operations in South Africa. They conclude that "Holding block size equal, percentage transactions costs increase at an increasing rate as one attempts to buy or sell more of the outstanding shares of a company. This undoubtedly reflects price pressure, resulting from the fact that stocks are not perfect substitutes for one another" (p20). Furthermore, the percentage cost of divestment increases as portfolio size increases.

There are also likely to be increased costs associated with reinvestment of dividends and of additional funds because funds will be invested in a smaller portion of the market, so a typical purchase will involve a larger percentage of the outstanding shares of a security hence higher costs. The data suggest that this is likely to be small - a differential of "only 0.09% of the amount invested" (Ibid.) compared to a conventional portfolio.

Advocacy of socially responsible investing is fuelled by the highly visible pool of pension fund assets, which are seen as "the most promising bridge between our society's problems and the limited resources available to meet them" (Schotland,1980, p30). Schotland claims that socially responsible investing raises 'virtually insurmountable problems of implementation' and conflicts with the primary goal of retirement security. A key implementation problem is the lack of information upon which to base 'social' decisions. "There is no systematic method for obtaining and evaluating information about the activities and practices of companies.....One would never make an investment on financial grounds without employing some standard of comparison" (Schotland,1980, p31). Reporting on social expenditure or "responsible' activities is not accorded the same prominence in annual reports as financial analyses, nor are they reported by all firms. Providing responsible research in this area is time consuming and expensive. This lack of objective measurement criteria raise the problem of making investment managers accountable. If they cannot be judged by portfolio performance, how are they to be judged?

In addition, deciding on the goals and priorities of the fund is likely to be problematic since views on what constitutes socially responsible behaviour are subjective, and in South Africa are likely to be politically coloured. Schotland goes so far as to say that if fund trustees are required to add the burden of deciding how to promote social values to their fiduciary responsibilities "then we will suffer amateur hour in the extreme" (Schotland,1980, p31), since they are unlikely to have the necessary expertise. Adding social goals will increase the time required to reach consensus.

Wagner deals with the apparent fear of South African fund managers viz. "strategic risks that are more difficult to quantify than investment or diversification risk" (p16). Divestment, or SDI, may lead to diversification loss beyond the control of the fund manager, and the fund must bear the risk of foregoing profitable investment opportunities, and the possible loss of competitive position. However, if the ethical trend takes root and blossoms, fund managers who have developed the research capability and so on in the field will find themselves with a significant competitive edge.

The replacement companies tend to be less well known and therefore followed by fewer analysts. Thus research is more expensive. "In addition, to the extent that the replacement stocks are riskier, hence subject to more frequent changes in fortune, higher turnover - executed at higher transaction rates - can be expected." (Wagner).

The implications for fixed interest portfolios are similar to those for equity portfolios - a smaller universe of corporate issues with lower average quality (Wagner, 19). The alternative universe, in the USA, had a 35% reduction in the amount of corporate debt securities available. "Fixed interest managers subject to divestment will have substantially less corporate debt of investment grade available. They would have to accept lower quality bonds or compete for the remaining higher quality issues" (Wagner, p19).

In general, the restrictions will increase investment risk, reduce investment and diversification opportunities, and increase the costs of research, trading and administration. And the larger the fund, the greater the impact will be.

INTERNATIONAL EXPERIENCE

5.1 INTRODUCTION

Theory and conventional investment wisdom suggest that ethical investing will yield poor returns since the social screening employed eliminates some securities from consideration. The theory implies that a curtailed investment universe reduces opportunities for effective diversification. Theory also, however, shows that it is possible, albeit highly improbable, to have a perfectly diversified portfolio containing only two securities - if they are perfectly negatively correlated. The CAPM demonstrates that every investor will want to hold some portion of the market portfolio, and reducing the investment universe puts the market portfolio out of reach of the ethical investor. If the theory is correct, the more ethical the fund i.e. the more stringent the criteria employed, the worse performance will be. This hypothesis is examined below using US and UK ethical mutual funds (unit trusts).

5.2 DATA

Data was obtained predominantly from the Internet, either from investment houses themselves, electronic journals or university databases. As highlighted in the introduction, data is sparse, and a full data set could not be compiled for all the available ethical funds. However, even if returns were available for all funds, the short time period for which all funds have been operating (less than one year) is too short for meaningful statistical analysis.

All calculations have been based on the assumption that a lump-sum investment is made at the beginning of the period, and all dividends are re-invested. A brief description of the data used is given in each section.

5.3 THE UNITED KINGDOM

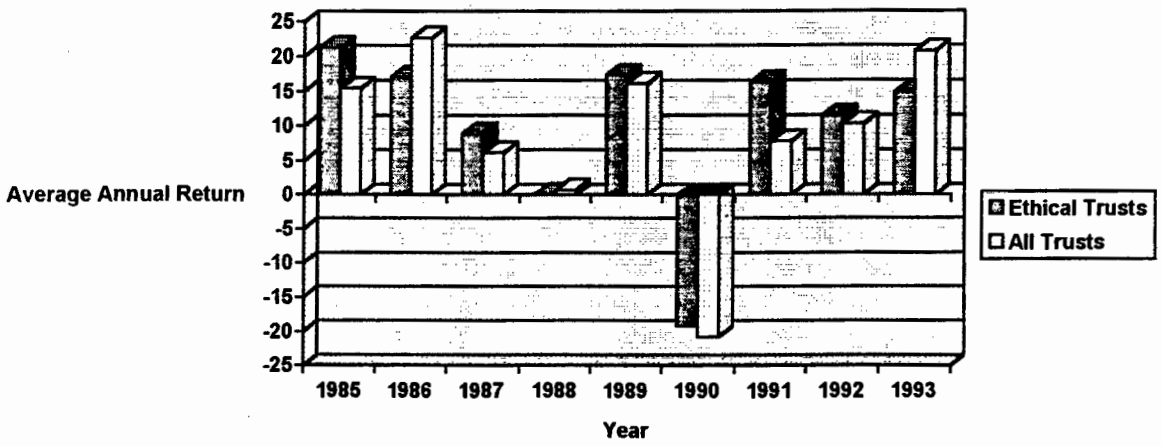
Although applying screening criteria undoubtedly leads to a smaller investment universe, more than 40% (320 billion pounds market capitalisation) of the UK stock market would be

acceptable for ethical investment. However, 80% of the FT-SE Top 100 companies would not meet ethical criteria, so ethical investors would need to focus on smaller companies (Holden Meehan, 1995). This is not necessarily detrimental, as the small firm effect was shown to have a positive influence on returns in the studies reviewed in chapter four. Furthermore, the FT-SE 100 companies are not always superior performers : in 1993 the FT-SE 100 index returned only 25.2% compared to 37.4% for the FT-SE Mid 250 index, 41.7% for the FT-SE Smaller Companies index and 28.4% for the FT-SE All Share index (Holden Meehan, 1995). Economic theory would suggest that smaller firms are prosperous during periods of recovery, when demand is growing, but are less profitable during recessions because they lack the reserves to compensate for weak demand, and have less ability to cut back on costs.

5.3.1 GENERAL PERFORMANCE

Although averages can be misleading, it is interesting to compare the performance of ethical unit trusts as a group to that of non-ethical trusts. This comparison is presented in Figure 5.1 below.

Figure 5.1 : Comparative Performance Ethical Unit Trusts vs. Conventional Unit Trusts



The diagram shows a trend towards superior performance by ethical unit trusts, with higher relative returns in 6 years out of nine. In 1990 when all unit trusts experienced negative returns, the ethical trusts offered marginally greater protection than conventional unit trusts.

Thus, the theoretical prediction that using social issues to screen investments predisposes portfolios to perform poorly, appears to be invalid, in the UK context. Averages can be heavily influenced by the performance of a few large portfolios, for example the oldest ethical fund in the UK is the Friends Provident Stewardship Fund, which still accounts for more than 50% of the value of all ethical funds in the UK. Therefore, any aggregates used for UK funds will be dominated by the performance of Friends provident, which has been very successful.

5.3.2 INDIVIDUAL PORTFOLIOS

Table 5.1 below provides a summary of the ethical funds available in the UK. The profiles show that, although 'ethical funds' tend to be analysed and evaluated as a homogenous group, they have very different characteristics. The main differences are in emphasis within categories and the approach to screening. Not all the funds which claim to be ethical, receive high ratings for 'ethicalness' or apply screening procedures rigorously. Some of the funds focus more on environmental issues, some have a particular geographical focus, and some rely on in-house research to evaluate securities while others make use of external research specialists. Thus it is simplistic to compare the performance of ethical funds with conventional funds, and infer that relative success or failure depends only on the criteria applied. A number of other factors such as management strength, geographical and sectoral focus play an important role.

Table 5.1 : UK Ethical Funds

Funds	FPS	JME	CUE	CIS	SEE	TSB	ALE	ALA	CME	EET	ESE	HFS	CBE	NMC	FH	SEF	NPI	CSF	SLG	CFA	AEF	MPP
Launch date	6/84	3/88	12/89	5/90	4/89	6/89	9/87	2/88	2/90	1/94	6/89	11/89	9/93	9/87	4/87	5/89	8/91	7/86	12/92	2/89	9/92	2/93
Ethical	5	5		2	5		4	4	4	3		2	4	4	3	3	5	4		3	3	5
Environmental	3	5	4	2		3	3	3	5	3	3	3	2	2	3	2	3		3	1	2	1
Pedigree	5	4	5	3	5	3	5	3	5	4	3	3	3	3	4	1	5	3	5	2	2	2
Total of Funds £m	414	62.0	33.0	26.9	25.5	23.3	22.1	19.0	15.9	15.5	13.5	13.5	12.8	12.3	11.8	9.1	6.7	5.2	4.0	3.6	1.3	0.35
Geographical Spread	UK/ NA	Int.	Int.	Int.	UK	UK+	UK+	UK	Int.	Int.	UK+	UK+	UK	UK +	Int.	UK	Int.	UK	Int.	Int.	Int.	UK
Applied to Screening	5	5	2	3	5	2	4	4	5	3	1	3	3	4	3	2	5	4	2	2	2	5
Outside Research	✓	✗	✓	✓	✓	✓	✓	✗	✓	✗	✗	✓	✓	✓	✗	✗	✓	✓	✗	✗	✗	✓
Independent Committee	✓	✓	✗	✓	✗	✓	✓	✓	✗	✗	✗	✗	✓	✓	✗	✓	✗	✓	✗	✗	✗	✓

Source: Adapted from the Holden Meehan Guide to ethical investing

Key:

FPS = Friends Provident Stewardship Fund
FH = Framlington Health Fund
NMC = NM Conscience Fund
JME = Jupiter Merlin Ecology Fund
SEE = Scottish Equitable Ethical Unit Trust
ESE = Eagle Star Environmental Opportunities Trust
HFS = Homeowners Friendly Society Green Chip Fund
CSF = Credit Suisse Fellowship Trust
ALE = Abbey Life Ethical Trust
ALA = Allchurches Life Amity Fund
CFA = City Financial Acorn Ethical Unit Trust
SEF = Sovereign Ethical Fund
TSB = TSB Environmental Investor Fund
CUE = Commercial Union Environmental Exempt
CME = Clerical Medical Evergreen Fund
CIS = CIS Environmental Trust
NPI = NPI Global Care Fund
SLG = Sun Life Global Management Ecological
CBE = Cooperative Bank Ethical Unit Trust
AEF = Abtrust Ethical Fund
MPP = Mercury Provident Personal Pension Plan
EET = Equitable Ethical Trust

The ratings in table 5.1 are supplied by Holden Meehan. The ethical and environmental scores indicate the degree of emphasis placed on these type of companies. The higher the score, the more emphasis placed on such investments, with a maximum score of 5. Pedigree refers to the track record and financial strengths of the fund manager, with higher scores indicative of stronger management. Geographical spread shows the spread of investments, with four sectors : UK only, mainly UK (UK+), International and North America (NA). Resources applied to screening is an assessment of the time, effort and expertise applied to screening investments. The higher the score the more comprehensive the screening process (with a maximum score of 5). Outside specialist research and independent committee indicate whether the fund makes use of these in selecting and monitoring investments.

It would be useful to test whether the amount of resources devoted to screening, monitoring by an independent committee and the use of outside research affects portfolio performance. However, there was insufficient data available to be able to conduct such a test in this study.

Although the majority of the funds were launched in the late 80's, performance data was only freely available for four of the funds. However, since criteria were only available for two of these funds, the remaining two were excluded. Table 5.2 below summarises the criteria applied by funds for which such data was available. The criteria are very similar across funds, differing in degree rather than substance. For example, Merlin Jupiter applies a restrictive 1% of turnover limit across the board whereas Scottish Equitable applies a 10% limit to some categories. Scottish Equitable does have one quirk which the others do not mention - they avoid banks altogether, since they have limited information on and no control over the lending practices of banks. This criterion excludes an entire sector from the investment universe, which would be expected to adversely affect performance, particularly given the prominence of the financial services industry in the UK economy. Interestingly, all the funds remain true to their origins by continuing to screen out companies with ties to oppressive regimes, although specific references to South Africa within this category are slowly being removed. Friends Provident places more emphasis than the other UK funds on positive criteria, although this trend is quite marked in the US. US funds also tend to take a more consultative approach by entering into discussion with company management to bring about change, rather than simply voting with their feet.

Table 5.2 : Summary of Criteria Applied

NEGATIVE CRITERIA

FUND	ENVIRONMENT / CONSERVATION	DIVESTMENT INTERNATIONAL	NUCLEAR	ALCOHOL/ TOBACCO	ARMS	ANIMAL TESTING
MERLIN JUPITER		more than 1% turnover from oppressive regimes	more than 1% of turnover	more than 1% of turnover	more than 1% of turnover	
SCOTTISH EQUITABLE		RSA -subsidiaries & associates	weapons & fuels; suppliers to nuclear industry	more than 10%,include sale		produce or sell products tested on animals
FRIENDS PROVIDENT	ozone depleting chemicals & use in products; environmental degradation; pesticides	oppressive regimes- use AI data	power stations, plant equip & fuels (include transport); radioactive waste; uranium	more than 10%,from production or sale	also products with military apps	include fur, factory farming, meat processing as main business, testing in any form but prod only not sale

POSITIVE CRITERIA

FUND	ENVIRONMENT	WORK	COMMUNITY	EDUCATION	OTHER
MERLIN JUPITER			positive corporate behaviour		sustainable development
FRIENDS PROVIDENT	energy & natural resource conservation;	customer, supplier relations high employee welfare; equal opportunities; carers' benefits -child care, flexitime, maternity leave etc.	at least 1% pre-tax profit to charities, affordable prods to disadvantaged	staff training & development	quality prods of long term benefit to community include basic necessities & life enhancing prods

According to the CAPM, the restrictive criteria applied by Friends Provident Stewardship, Merlin Jupiter and Scottish Equitable would make them prime contenders for poor returns. Their criteria are specific, and quantified which makes them easier to apply. The fairly low percentage of revenue earned from activities in exclusion categories is likely to significantly reduce the number of companies from which to choose in particular industries. This applies particularly to food processing industries and manufacturing for Friends Provident. For example, not only do they exclude manufacturers of ozone-depleting chemicals, but also companies which use these chemicals in their own production processes. Factory farming is widely used in the UK given the land constraints, but Friends Provident screens against such farming methods, again excluding a significant portion of a particular sector. The avoidance of the banking sector by Scottish Equitable has already been mentioned. Table 5.3 below examines the performance of these funds, against non-screened portfolios:

Table 5.3 : Pension Fund Comparative Performance

FUND	1993	1992	1991	1990	1989	1988	5 year
Friends Provident	31.50	17.30	22.30	-13.40	26.10	15.10	15.50
Scottish Equitable	23.50	15.50	22.10	-10.30	9.50		11.40
Avg. Ethical	26.95	14.90	24.68	-12.50	22.45	13.40	14.20
Avg. UK equity pension	28.60	18.40	14.60	-13.50	26.20	10.10	13.40
Avg. managed pension	29.40	18.50	14.10	-13.50	28.30	11.80	13.90

Source : Pensions Management Feb 1994

Contrary to the predictions of the CAPM, the restrictive criteria applied by Friends Provident and Scottish Equitable do not seem to have damaged their performance. Friends Provident outperformed other ethical pension funds, and non-ethical equity pensions in four of the 6 years. It also has a higher 5 year performance, beating the averages. Over a nine year period to January 1993 it achieved a 21.4% average annual growth compared to 15% for the pension fund average (Holden Meehan, 1995). The Wyatt Pensions survey showed the Friends Provident Stewardship Fund to be the most consistent performer of those reviewed over this period - it outperformed the Hoare Govett small companies index in 7 years out of eight, and the UK All Share Index in five years out of eight (Ibid). In addition, "in the euphoric stockmarket of 1987 running up to Black Monday the Stewardship fund was in the top quartile of performers. In 1988 when the bubble had burst and investment conditions were

very different, the fund was still in the top quarter of performers" (Ibid.). Such a track record hardly lends credence to the notion that strictly enforced screening criteria damage performance. Although Scottish Equitable achieved returns slightly below the non-screened averages, rigorous analysis would be necessary to determine whether the difference is statistically significant. Furthermore, the returns outpaced inflation (with the exception of 1990, when Scottish Equitable recorded the lowest loss).

In order to understand the performance of ethical funds it is necessary to analyse the particular economic circumstances under which such returns were achieved, which is beyond the scope of this paper. Holden Meehan asserts that although the small firm focus would be expected to reduce returns on ethical portfolios in a recession, the concentration on *high quality* small firms allowed these funds to maintain performance levels in 1991, but the under-representation of high-performing sectors such as aerospace, electricity and banks retarded performance in 1993 (Holden Meehan, 1995). Given the long-term nature of pension fund investment, a relatively poor performance in one year is unlikely to have significant effects on the portfolio. Thus it would seem that the application of ethical screening alone cannot explain the performance of ethical portfolios.

5.4 THE UNITED STATES

Although the US has a longer history of ethical investing than the UK, few of the funds currently in existence have been operating for more than 10 years. Some of the earlier funds have merged.

5.4.1 GENERAL PERFORMANCE

Table 5.4 : US Ethical Funds

	1 YR to mid 1994	5 YR to mid 1994	1 YR to mid 1995	3 YR to mid 1995	5 YR to mid 1995
Average - all ethical funds	-0.33	**7.175**	13.98	8.04	7.13
Average growth and balanced funds	**1.275**	**7.733**	16.04	9.63	8.75
S&P 500	0.79	6.8	23.76	10.22	9.47

Source : various

Table 5.4 demonstrates the impact of timing on measurement of returns. The complete data set is presented in Appendix E. In general, the returns measured to July 1995 are superior to

those measured to June 1994. The underlying data shows that for the five year period to June 30 1994, only two out of eight ethical funds performed worse than the S&P 500, and one of these was an environmental fund. One year later, this is no longer so. For the five years to July 30 1995, only one ethical portfolio had returns exceeding that of the S&P 500, and on average the ethical funds fared slightly worse, as can be seen from table 5.4. Without rigorous testing, it is not possible, however, to say whether the difference in performance is significant. The trend would seem to suggest that the ethical funds could not match a surging market, yet maintained value better in a declining market. Ethical investors may be prepared to accept slightly lower returns in a bull market in exchange for this greater stability.

The average 1 year return to June 30 1994, for all the ethical funds is not encouraging, but it is strongly influenced by the very poor performance of the environmental funds. This was not a good year for the US stock market, as evidenced by the low return on the S&P 500. It is also worth noting that if the environmental funds are excluded, the average return for ethical portfolios in this year exceeds that of the S&P 500. The returns on portfolios which invest in only one sector, as with the environmental portfolios, are obviously dependent entirely on the fortunes of that sector. The poor performance of the environmental funds does not show that ethical investing yields low returns, but that a non-diversified portfolio exposes the investor to considerable risk. The higher average return on ethical funds, excluding the environmental portfolios, suggests that a diversified ethical portfolio maintained investor's returns better in a bear market, than did a non-screened portfolio. The underlying causes of the improvement in the S&P and the lagging behind of the ethical funds would need to be analysed in more depth.

5.4.2 INDIVIDUAL PORTFOLIOS

Ethical money market funds have been ignored since they do not fall within the ambit of the performance debate. Balanced funds (B) are fairly conservative, long-term investment vehicles with a roughly 50-50 split between equities and bonds. Environmental funds (E) invest only in stocks of companies in the environmental industry[14]. As suggested by theory, these funds are very risky owing to their concentration in only one sector. Their consistently poor performance supports the need for diversification. Global funds (GL), as the name indicates, invest primarily in securities on international markets. Growth funds (G) are long-term investment vehicles focusing on capital appreciation. Thus concentrating on the short term as

an indicator of the performance of such funds would be misleading. Income funds (I) are relatively conservative, with income as the primary objective, and capital appreciation a secondary consideration.

The number of funds in operation for five years or longer is limited - only eight funds. Of these five have been in existence for ten or more years, with Pax World the oldest at twenty-four years. Thus even if historical performance data were available for all five of the oldest funds, the sample size is still too small for rigorous analysis. It is interesting that less than half the funds (43%) have an A- or better social rating - which means that less than half the funds have comprehensive, quality screening procedures which are consistently applied. B rated firms have average screening criteria but tend to focus more on negative than positive screens. C rated funds have very limited screening criteria which may be inconsistently applied. The ratings are courtesy of Franklin Research and Development, as published in the Mutual Funds On-line Magazine (Mutual Funds On-line, November 1995). The criteria applied are summarised in table 5.5 below.

It is evident from the table that the criteria applied by US funds are very similar to those used in the UK. Information available to ethical investors is, however, superior in the US. There is a plethora of private firms and information services specialising in providing ethical ratings, screening and reviews. A number of publications, such as the GreenMoney Journal, and Franklins Insight, provide monthly ethical ratings of companies, and ongoing research into the activities of companies is carried out by a large number of independent organisations. Much of this information is available on the Internet. The availability of such information reduces the costs of research, which was noted as a drawback to ethical investing in chapter two. Furthermore, with the number of firms and individual fund managers specialising in ethical fund management, it is relatively simple for a fund or investment house to contract out for advisors if they do not have specialised expertise in-house.

---

[14] Includes, inter alia, firms involved in environmental management and recycling

Table 5.5 : Summary of Criteria (US funds)

1. *NEGATIVE CRITERIA*

FUND	ENVIRONMENT / CONSERVATION	WORKPLACE	DIVESTMENT / INTERNATIONAL	NUCLEAR	ALCOHOL/ TOBACCO	ARMS	ANIMAL TESTING	OIL & CHEMICAL	POLLU -TION
CIT TRUST	EPA violators	discrimination : age race, gender, sexual orientation, religion, disability; union busting; health & safety violators	RSA	X	X	X	X	X	
FIN ARCH		poor employee relations	repressive regimes	X	X	X			X
BETTER WORLD			RSA; human rights violators			X	X		
CALVERT	EPA violators; egregious environmental record	labour management disputes, discrimination	contribute to human rights abuses abroad; repressive regimes	nuclear power, weapons or equip. for this	more than 10% of revenue	>10% of revenue			

2.POSITIVE CRITERIA

FUND	ENVIRON	WORK	R&D	COMMUNITY	EDUCAT'N	POLLUTION	OTHER
CIT TRUST	energy efficient; recycle	good employee relations, equal opportunity	building, not just harvesting old capital	CSR, not reinvest in self	skills upgrading for workers etc.	reduced agriculture dependence on harmful chemicals	invest in construction/fin of low cost housing; communications, high tech ,consumer products, healthcare, finance
FIN ARCH	environmental services	women & minorities in senior positions		community services & charitable contributions		pollution control	
BETTER WORLD	renewable energy	employee relations & healthcare		corporate citizenship			international human & animal rights
CALVERT	recycle; sustain environment	employee participation; equal opportunity					healthcare

Source: various

Figure 5.2 below shows the performance of the seventeen funds for which three year returns (to July 1995) were available, against the S&P 500. As with any investment, there were ethical funds that performed better than the S&P500 and some which performed worse. The funds have been sorted by social rating as indicated by the sections demarcated on the diagram. Theory holds that the A rated funds, i.e. those with the most restrictive and strictly applied criteria, should fare relatively poorly. This implies that the diagram should show a clear upward trend from left to right. On the contrary, the diagram shows that within each category there are under-performers and over-performers, but one category does not consistently dominate another. It also shows that the highest performing fund, the Parnassus fund, is an A rated fund. This finding is consistent with the UK data, and supports the notion that ethical investing can be as profitable as conventional investing.

5.4.3 ETHICAL INDICES

In chapter four, the issue of an appropriate benchmark was raised. It was suggested that the performance of ethical funds should not be compared to an index such as the S&P since the ethical investment universe is different from that of conventional investing. In the US there are 2 ethical indexes against which performance can be measured - the Domini Social Index, and the Citizens Index. The Citizens Index is composed of 300 ethically acceptable firms, and the Domini Index of 400 such firms, 250 of which are included in the S&P 500.

The data received from Citizens Trust on the Citizens Index and from Kinder, Lydenberg and Domini was in monthly return format. As the Domini Social Index was only launched in May 1990, and data for the Citizens index was not available post March 1995, the data set was reduced to the time period over which data for both ethical indices was available. The monthly returns were used to convert the data into indices, with April 1990 set to 100. The same was done for the S&P monthly returns. Although these transformations mean that the calculated indices may differ slightly from the actual indices, the trends in the data will be preserved, and it is the trends rather than the precise magnitudes of the indices which is relevant.

Figure 5.2 : Three Year Returns - Ethical portfolios vs. The S&P 500

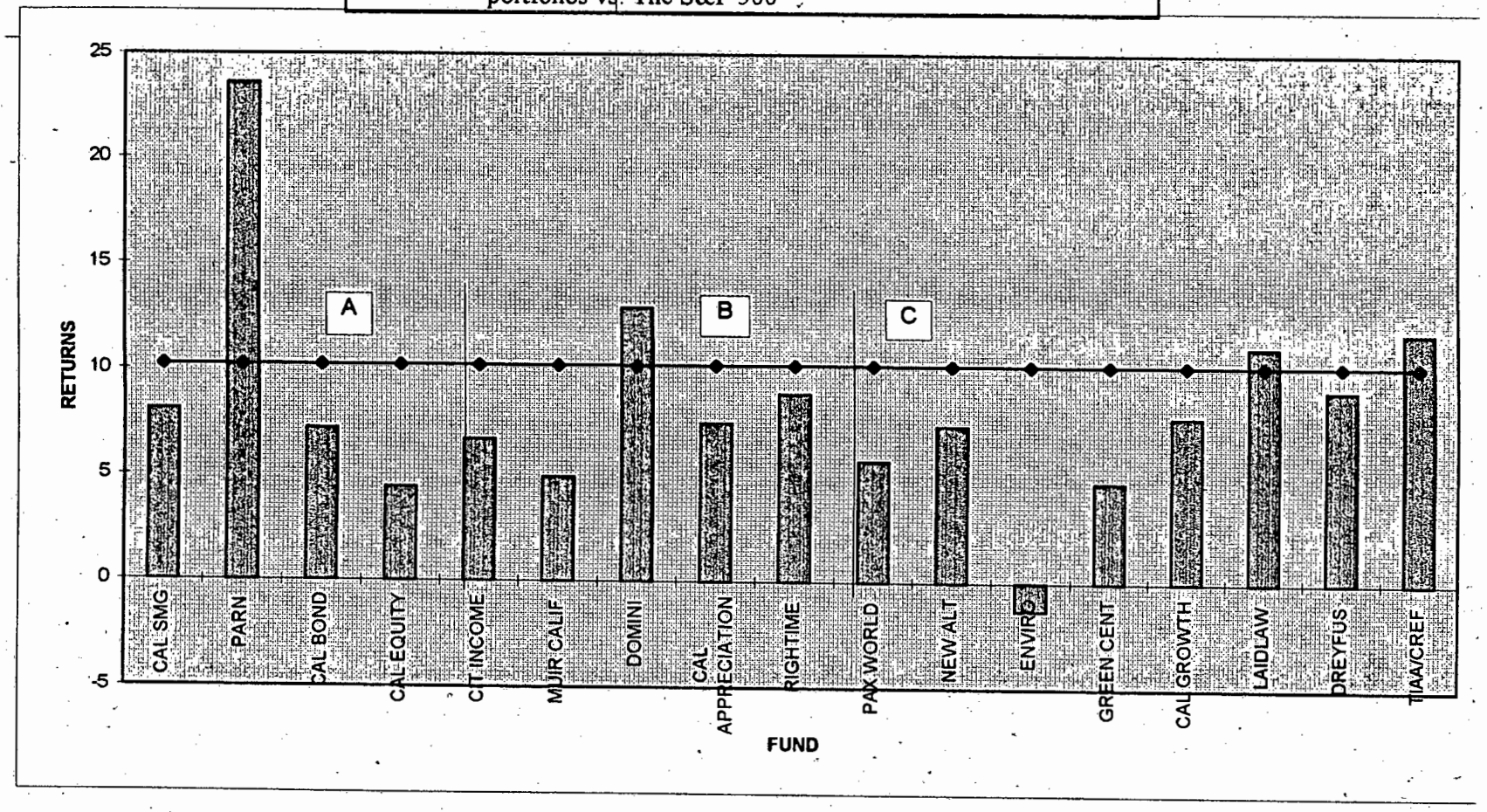
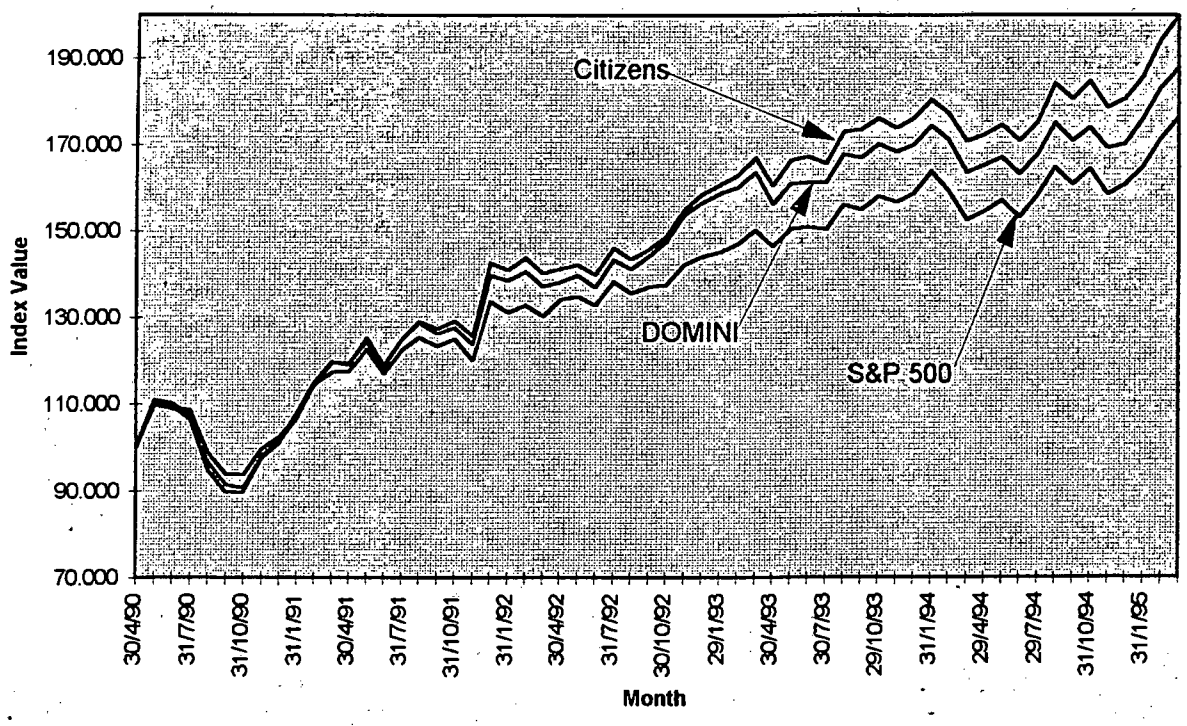


Figure 5.3 : Ethical Indices vs. the S&P 500



The graph shows that, apart from the last quarter of 1990, the ethical indices have consistently outperformed the S&P 500. This trend lends further support to the role of factors other than screening criteria, such as fund management, or a particular investment view held by the sponsoring investment house, in the performance of ethical funds. The ethical indices suggest that ethical investing could provide a superior long-term performance with judicious stock selection. Furthermore, when the ethical indices did underperform, they did so by a small margin, and tended to overperform by a larger margin. The Citizens Index, with fewer S&P 500 companies, also consistently outperformed the Domini Social Index.

It would seem more appropriate to measure the performance of ethical funds against an ethical index rather than the S&P 500. Since the Citizens Index has shown a stronger performance than the Domini Social Index, it will be used in the comparison. The one year and five year returns on the Citizens and S&P 500 indices have been multiplied by an adjustment factor, to compensate for the effect of using a different base, and to make them

consistent with the available data for individual portfolios. Portfolio returns to 1994 are used because data for the Citizens index is only available to March 1995. Income funds have been removed since they are composed of fixed interest securities, and therefore not comparable to an equity index. Funds which were launched after June 1993 and so do not have a full years return to June 1994 can also be ignored. The returns for the remaining ethical funds can be compared to both the citizens index and the S&P 500 :

Table 5.6 : Ethical Fund Returns vs. the Citizens and S&P 500 Indices

FUND NAME	SOCIAL RATING	1 YR to mid 1994	5 YR to mid 1994
CALVERT SOCIAL MANAGED GROWTH	A-	-1.9	6.7
PARNASSUS FUND	A-	**4.4**	**11.1**
CALVERT SOCIAL EQUITY	A-	-3.9	5.6
CITIZENS BALANCED	A-	-4.2	NA
CITIZENS GROWTH	A-	-3.1	NA
PARNASSUS BALANCED	A-	**7.3**	NA
DOMINI SOCIAL EQUITY	B	0.2	NA
CALVERT ARIEL APPRECIATION	B-	7	NA
RIGHTIME SOCIAL AWARENESS	B-	-6.6	NA
PAX WORLD FUND	B+	-3.4	7.4
NEW ALTERNATIVES FUND	B+	-7	2.9
PROGRESSIVE ENVIRONMENT	B+	-11.5	NA
GREEN CENTURY	B+	-3.8	NA
CALVERT WORLD VALUES GLOBAL	B+	**18.7**	NA
CALVERT ARIEL GROWTH	C	**5.5**	6.7
LAIDLAW COVENANT FUND	C	**1.3**	NA
US AFFINITY GREEN FUND	C	**4.9**	NA
CALVERT STRATEGIC GROWTH	C	NA	NA
DREYFUS 3RD CENTURY	C-	-3.3	**8.9**
TIAA/CREF SOCIAL CHOICE[15]	NR	-0.3	NA
Average		0.02	7.04
Average growth and balanced funds		1.11	7.73
Citizens Index		1.1	8.12
S&P 500		0.79	6.8

Source: various

Funds which outperformed the Citizens index are shaded. Although the return on the Citizens Index is higher than the S&P 500, there are seven funds which outperformed it on one year returns, and two over a five year period.

[15] This is a college retirement fund, so has eligibility criteria.

Even though these results are very general, they certainly seem to refute the claim that ethical investing will **always** be less profitable. They would suggest that ethical investing is no different to conventional investing with regard to performance - some funds perform well and others not, and the underlying causes are more likely to be related to fund management than to the degree of 'ethicalness'. The variability in the data supports this - funds did not consistently fare better or worse than the S&P, with the exception of the Parnassus Fund and the Domini Social Equity Fund, both of which outperformed the S&P, and the Citizens index in all the periods considered. Thus, attributing the performance of ethical funds to the small firm effect, or to their use of social screening is an over-simplification.

5.4.4 CASE STUDIES

Between them the Calvert and Citizens Trust groups manage 13 of the ethical funds in the US. It may, therefore, be instructive to look at these funds in more detail, and see whether their structure or management yields useful lessons for South African funds. The information in this section was provided by the groups themselves.

a) **The Calvert Group**

The Calvert Group, founded in 1976, currently manages 29 funds (26 mutual funds) with more than $5 billion in assets. Although the group has a diverse range of funds, it specialises in two areas : ethical investing and tax-free management, which are not mutually exclusive. Since they are specialists in ethical investment, their approach may hold key lessons for South African portfolios. In addition to providing services to ethical investors, Calvert attempts to be an ethical company itself, engaging in recycling programmes, supporting community outreaches and offering flexible benefits to employees.

An innovative feature of the ethical funds managed by Calvert is the High Social Impact Investment Programme, whereby up to a certain percentage of fund assets (the percentage differs among funds) can be allocated to high social impact investments. These high social impact investments would be similar to those projects labelled socially responsible in South Africa, and provide a model for supporting RDP-related projects.

The programme was initiated in 1990, with the Social Investment Fund allocating up to 1% of assets to such investments. Other funds may invest up to 3%, while the newest fund, New Africa may invest up to 10%. Such a low percentage allocated to high risk projects minimises

the negative effects on the overall portfolio should the project fail. Across the various funds $7.7 million is invested in community based organisations such as low-income housing funds, community development loan funds, micro-enterprise development funds and community development credit unions. Although this is a relatively small amount, it can account for a sizeable proportion of development projects, and has been provided by only one firm. Further to the high impact programme, the Social Investment Managed Growth Portfolio and the World Values Global Equity Fund have Special Equities programmes which invest directly in private companies or initiatives whose goals are aligned with Calvert's screening criteria.

Although each of the funds will be briefly reviewed, special attention will be paid to the New Africa fund, since it invests in Africa, and primarily in South Africa. Criteria for each fund will not be specified, as these were summarised in table 5.5 above.

- **Calvert World Values Global Equity Fund** attempts to achieve a high total return through a diversified portfolio of US and foreign equities. Day-to-day management of the fund inter alia monitoring and researching portfolio selections, and allocating assets is done by an international investment management firm. No less than 65% of the portfolio will be invested in common stocks, spread over at least three countries. In addition to high social impact investments, "due to the particular social objective of the Fund, opportunities may exist to promote especially promising approaches to social goals through privately placed investments" which are likely to be high risk, as they generally involve small, untried enterprises selected for their social objectives. Such investments are also unlikely to have a ready secondary market, which has been raised as an issue by South African portfolio managers. Until the lifting of exchange controls, an internationally diversified portfolio is not an option for South African investors.
- **Calvert Social Investment Fund** is divided into four portfolios - money market, managed growth, bond and equity - each with different objectives and criteria. The money market portfolio ,obviously, invests in money market instruments, the managed growth portfolio in a mix of stocks, bonds and money market instruments, the bond portfolio in bonds and other debt securities, and the equity portfolio exclusively in equities. Calvert Asset Management is the Fund's Advisor and a number of Sub-Advisors are employed according to their expertise in particular markets. The Managed Growth Portfolio does

not specify an asset mix percentage except that no more than 5% may be invested in junk bonds. The same restriction applies to the bond portfolio.

All potential investments are first screened for financial soundness, and then against the social criteria. To qualify, companies must meet the minimum standards for all criteria. No more than 25% of the assets of any of the portfolios may be invested in any one industry, with no more than 5% in any one firm, which is fairly standard practice. No more than 10% of the value of the assets of any portfolio may be invested in illiquid securities, which would include privately placed investments as mentioned above. High social impact investments are limited to 1% of any portfolio.

- **Calvert Capital Accumulation Fund** aims to achieve long-term capital appreciation by investing primarily in stocks of small to medium sized companies (i.e. market capitalisation between $100 million and $5 billion). Companies which are undervalued but demonstrate growth potential will be targeted. The fund uses a team of managers as opposed to relying on the decisions of one portfolio manager. Although the fund strives to invest primarily in equities it may invest in debt securities or may resort to cash or cash equivalents should market conditions make this necessary. Criticism has been levelled at several funds claiming to be ethical who, on closer inspection, have disproportionately high holdings of cash. High social impact investments are restricted to 3% of assets.
- **Calvert New Africa** is the first US mutual fund to devote its entire portfolio to African and African-associated investments. However, initially 85% of the Fund's investments will be made in South Africa, as the most developed market economy on the continent. New Africa Advisers, a subsidiary of an American financial services group will be responsible for the day-to-day management of the fund. A network of analysts on-site throughout Africa will provide the necessary investment research.

New Africa's direct investment programme, at 10% of assets, is larger in scale than the high social impact component of other Calvert funds. Calvert acknowledges that such a portfolio carries above average risk, but believes that the "extraordinary growth potential" of the continent more than compensates for this (Prospectus, 1996). Justin Beckett, portfolio manager of New Africa Fund, maintains that "the greatest economic boom our country has ever experienced was right after World War II, when the American middle class was

born....similarly, the economic impact of Africa's middle class evolution will be exponential" (Prospectus, 1996).

The Fund bases its optimistic outlook on Africa's investment potential on some seemingly tenuous assumptions:

Firstly, that its vast natural resource base, geographic location and extensive labour supply make Africa a good investment choice, and in particular that "South Africa represents an exceptional investment situation : the growth potential of an emerging market combined with the sophistication of an established market"(Ibid). Protracted civil war, relatively high illiteracy rates, poor economic management and other factors have hampered the ability of several African countries to capitalise on their natural resources. An extended period of declining commodities prices have exacerbated the economic difficulties of countries dependent on the export of primary goods. These countries have become reliant on foreign aid, have high rates of unemployment and little basic infrastructure intact. Although Africa may have a large labour supply, it is largely unskilled and uncompetitive with countries such as Malaysia, Korea and Thailand. Furthermore, even if commodity prices were to rise, African exports are under pressure from regional trading blocs and increasing competition from Eastern Europe, Latin America and Asia.

Secondly, the Fund cites US trade with Africa - it exceeds that of the combined trade between the US and the former Soviet Union and Eastern Europe. In addition, Nigeria and Angola export 75 percent as much oil to the US as does Saudi Arabia. However, as mentioned above, changes in trade policies internationally, stricter GATT provisions and stronger regional trade groupings do not auger well for further market penetration by African countries.

Thirdly, more than half the countries in Africa have made moves towards democracy and initiated economic reforms under international pressure. These emerging democracies are notably fragile, and economic reforms have had varying degrees of success. The risk of political and economic instability in these countries remains high. In South Africa the skittishness of international financial markets was demonstrated by the sharp decline in the rand exchange rate, fuelled by rumours of President Mandela's ill-health, and more recently by the resignation of the Minister of Finance, Chris Liebenberg.

Fourthly, the Fund is placing significant emphasis on the downstream effects of the RDP, and the evolution of a black middle class. Working on the assumption that the ambitious target of 1 million houses (with water, electricity and water-borne sewage) built and a further 2.5 million electrified by the year 2000 is met, "the opportunities for investment in consumer products is limitless" (Prospectus, 1996). Economic theory predicts that following electrification demand for consumer durables will increase, and other industries will be stimulated, creating more jobs and further stimulating demand for goods and services. As more communities become housed, the demand for schools, clinics and shopping facilities are also expected to increase. Implicit in this multiplier effect is the willingness, and ability of the community to pay for the goods and services. The economic enfranchisement of South Africa's black population is critical to the development of such a middle class.

Lack of clarity on local government structures, and mechanisms for channelling the RDP budget has slowed down delivery on RDP projects. However, once the RDP gains momentum the consumer goods, light manufacturing, construction and service sectors of the economy are well-positioned for growth. Dr Robert Zevin has calculated that South Africa needs to spend R249.5 billion over the next 8 years on basic infrastructure, in order to reach a sustainable growth path, with adequate employment growth (Zevin, 1996).

The Fund must invest no less than 65% of its assets in companies which derive at least 50% of revenue from goods produced or sold or services performed in Africa, or which have at least 50% of their assets situated in Africa (Prospectus, 1996). Initially the Fund will target six industries : consumer products, telecommunications, healthcare, light manufacturing, services and tourism. Three types of company in these sectors will be considered - companies entering the African market and looking for partners with local experience, South African conglomerates looking to unbundle or private African companies in search of growth capital. The Fund will become involved in one of four ways. Firstly it could buyout an established business. Secondly it could invest in closely-held listed companies which are undervalued. Thirdly it could supply venture capital and lastly take advantage of special investment opportunities such as privatisations. The aim of such direct investment is to generate equity gains by improving operations and stimulating growth, not simply to effect financial restructuring. To reduce agency or monitoring costs the management of each company with

which the Fund is associated will be required to make a 'meaningful' investment in that company, in an attempt to promote identification with the best interests of the firm.

It has been proposed earlier that the success or otherwise of ethical investing may have more to do with particular investment strategies and management styles of portfolio managers than the application of social screens per se. The Calvert Group retains a number of investment management firms as sub-advisors, each with a particular investment strategy or philosophy, and Calvert tends to use the same firm across a certain type of investment such as equity portfolios or bond portfolios. Thus, given that variation in strategy and management style is likely to be less intrafirm than interfirm, and that Calvert has an in-house social research team it is interesting to compare the performance of Calvert's ethical funds with their other funds in the same category.

Table 5.7 : Calvert Ethical vs. Conventional Portfolios

Portfolio Type	**Ethical Average**	**Conventional**
Money market	5.02	3.85
Bond market (1yr)	15.33	11.89
(5 yr)	11.93	8.83
Equity portfolio	8.94	NA

Source : calculated from data supplied by the Calvert Group

The data in table 5.7 is to December 8, 1995. The money market figures reflect the 7 day effective yield, and the other figures one year returns unless otherwise stated. The averages were calculated across both classes of shares offered to investors. In both the money market and bond portfolios, the ethical portfolio was the highest performer. Using intrafirm returns is a very crude adjustment for management style or investment philosophy, but the results demonstrate that ethical portfolios can outperform conventional ones managed in a similar fashion.

b) **Citizens Trust**

Previously known as Working Assets, Citizens Trust came into being as the Working Assets Money Fund in 1982. Citizens Trust employs Citizens Adviser to manage its portfolios on a

daily basis, and a number of sub-advisors with particular expertise in certain markets. As a fundamental policy, no Citizens Trust portfolio will hold more than 25% of assets in any one industry, or more than 5% in any one company. No more than 10% of portfolio assets may be invested in private placements or other illiquid securities, and no such investments can be made unless the portfolio has assets in excess of $10 million at the time of purchase. Citizens Trust offer seven ethical portfolios.

- **Working Assets Money Market Portfolio** is designed for short-term cash management, and aims to produce stable, high current income. Thus the portfolio invests only in short-term money market instruments with minimal risk, and an average maturity of 90 days.
- **Citizens Income portfolio** invests in fixed income securities, to generate current income. At least 65% of assets must be invested in investment grade securities. The average maturity in this portfolio is between 5 and 15 years.
- **Citizens Index Portfolio** is a market weighted portfolio of the 300 companies comprising the Citizens Index. Approximately 200 of these companies are included in the S&P 500, so are large companies in contrast to the perception that ethical funds are overweighted in small stocks. It is a core holding, similar to the role played by the 'market' portfolio of the CAPM. The holding of each security is in proportion to its relative market value, as with the market portfolio. Companies which fail the annual social responsibility review will be removed from the Index, and replaced in the portfolio by a similar company from the same industry.
- **Citizens Emerging Growth Portfolio** invests in small and medium sized companies which offer the potential for aggressive growth. Under normal circumstances, at least 65% of the portfolio will be invested in companies averaging $2billion in market capitalisation. The emphasis is on companies poised for above average growth, and generally those developing new and innovative products.
- **Citizens Global Equity Portfolio** invests in both US and foreign stocks, aiming to produce capital appreciation. The portfolio, under normal circumstances, will invest 50% of assets in foreign companies from no less than three countries. No more than 25% of assets may be invested in countries classified as 'emerging' (which would include countries such as Argentina, Brazil, Singapore, Taiwan, Korea and South Africa).

- **The Muir California Tax-free portfolio** is designed to produce a high level of current income which is exempt from federal and California state tax. According to Gail Seneca, portfolio manager, this provides "a number of very interesting investment opportunities with high social impact, as well as potentially attractive financial results". The portfolio buys tax exempt, investment-grade securities issued by cities, towns or other organisations within California, with a focus on bonds issued for 3 specific purposes :

1. to finance education projects
2. to finance environmental projects
3. provide funds for the construction, development or purchase of affordable housing, especially low-income housing

This type of portfolio offers interesting possibilities with South Africa's move to wards decentralisation. Municipal bonds would offer a means of channelling local funds into provincial development projects, provided that local government has the means to service the debt.

- **The E-Fund** offers investors an E-fund Mastercard debit card which can also be used at ATM's. No fee is charged on cheques written and there is no minimum balance required although individual investors are required to open the account with a minimum of $1000(and have a regular monthly deposit), and institutional investors $500 000. A key feature of the account is the E-fund refund, whereby 1% of the value of purchases made with the E-fund card is credited back to the portfolio. This concept is already being used in South Africa. For example Nedbank's Green Trust accounts pay 5% of the value of purchases to the World Wildlife Fund.

SOUTH AFRICA

6.1 INTRODUCTION

In South Africa, the call for ethical investment has been directed primarily at pension funds, owing to their long time horizons, and large, highly visible pools of funds. The motivation seems to be primarily political, with the focus on the provision of funds for community upliftment, thereby reducing pressure on the RDP budget, rather than on the promotion of sustainable development. As noted above, community upliftment is a subset of ethical investment, and could be incorporated into the screening criteria applied, or through a high impact component as is done in the US. For pension funds, investment decisions made now can affect benefits paid two or more decades in the future. If returns are low and liabilities cannot be met or increases in benefits granted, the beneficiaries suffer. In particular, low-income individuals will bear more of the burden since they generally have no other form of saving. This point was stressed in COSATU's opposition to the recent imposition of a 17% tax on the income of retirement funds. Firms with defined benefit schemes will have to increase their contribution rates to compensate for lower returns, reducing corporate earnings and harming performance. In the case of defined contribution funds, the fund participants are directly affected by lower returns. These are important issues to consider in South Africa, but the evidence presented above does not seem to indicate a high risk of low returns.

The JSE is relatively small, and isolated in that South African investors are not permitted to utilise foreign markets, with the recent exception of asset swaps which must be individually approved by the Reserve Bank. The smallness of the Stock Exchange, the concentration of ownership and exchange controls result in liquidity constraints. Furthermore, the investment universe is small to begin with, so that reducing the universe by excluding particular shares or sectors is likely to have more impact on returns than in the US or the UK. The JSE is also unique in that it is dominated by a few large conglomerates, and in particular by the mining sector. The 'big 5' conglomerates account for 87% of the market capitalisation of the JSE

(Kantor, 1993). The fortunes of the mining sector depend on world mineral prices and are, therefore, likely to be affected by different underlying market factors than other sectors (Gilbertson and Goldberg, 1981). These factors have significant implications for creating diversified portfolios, particularly if an investor intends excluding entire sectors rather than specific companies. The concentration of ownership opens a thorny debate. When applying a social screen, does it apply only to the specific company being considered, or to the whole pyramid. For example, if the tobacco criteria were adopted, and the screen applied to all associated companies, the entire Rembrandt group would have to be excluded which would eliminate a sizeable portion of the JSE. It would, therefore, seem reasonable given the size of the South African market, to limit screens to a particular company. As the holding company structures tend to be purely financial, with subsidiaries engaged in a variety of enterprises with totally separate management structures and operating procedures, this does not seem contrary to the spirit of ethical investing.

The capital market in South Africa also tends to be dominated by a few large institutional investors, notably the life assurers who manage a large proportion of pension funds as well as operating their 'own' funds. If these institutions begin excluding or targeting particular shares, the effects are likely to be felt through price changes. It is relatively difficult for these funds to significantly alter their portfolios in such a small market without causing ripples through the market. This could be a significant advantage in terms of adopting the positive approach and applying pressure on companies to improve their ethical profile.

The question of availability of suitable vehicles for the high social impact portion of a portfolio is critical. Several ethical, RDP-friendly portfolios have recently been launched. Each of these will be discussed as case studies in section 6.3.

6.2 SURVEY OF SOUTH AFRICAN FINANCIAL INSTITUTIONS

With attention in South Africa focused on socially desirable, rather than ethical, investment a survey was conducted to determine the level of involvement of South African financial institutions in SDI. Based on the assumption that the larger institutions were more likely to be involved in SDI, a sample of the 15 largest institutions in the financial services industry was selected. A list of these is given in appendix D. The response rate to the initial contact was

80%. One respondent indicated no involvement in any projects, and two declined to be interviewed[17]. Of the remaining nine, five in-depth interviews were conducted. Financial constraints prevented personal interviews being conducted with the Johannesburg respondents. Interviews were preferred since the type of information required was not well suited to standard questionnaires. Questions tended to be open ended, discussion questions. A list of questions was drawn up (see appendix C) to provide a framework for the discussion, but not all the questions applied to all interviewees, since some fell out of the range of the interviewee's job description.

Definitions of socially desirable investment ranged from enlightened self-interest, through helping people help themselves, to achieving human dignity through opportunity. Although all indicated that there needed to be some response to community needs, the size and type of response varied. One opinion raised, and a common perception of institutional thinking, is that the Government is responsible for social upliftment, while the institution is responsible to its policyholders or shareholders. Such an opinion is a consequence of the narrow focus on community upliftment, rather than ethical investing, and ignores the potential for portfolios to be both ethical and profitable. It also rests on the assumption that the 'best interests' of the policyholder is always the highest financial return. Another interviewee concurred that Government should cater to a certain level, but that the private sector certainly had a role to play. There was consensus that a business approach needed to be applied to all projects supported, since purely charity-driven projects are not sustainable. As one interviewee put it there is a need to move away from a "dependency culture", where projects and people have no incentive to become self supporting.

There is clearly corporate involvement in social responsibility i.e. donations, which involve relatively small budgets, rather than social investments which would require larger sums but provide some financial return. Although some funds are provided directly to particular projects, the majority of funds are channelled through other organisations. For this reason I have divided the projects into direct and indirect involvement:

[17] One of these supplied social reports, and the other referred me to the **LOA** since their SDI was done through the **IDU**.

6.2.1 DIRECT INVOLVEMENT

There has been a move by all the companies surveyed to regionalise their social programmes. Money is disbursed to regional offices for channelling to local projects in which the regional office can become involved. One of the Life Offices has instituted a social involvement association, which consists of staff members involved in grass-roots development projects. Funds are then allocated to these projects on the condition that the staff member remains involved. Common projects cited include community clinics, crèches and making company training facilities available to communities. All projects are thoroughly researched before being approved for funding, to ensure credibility and viability. Assistance does not consist of a once-off donation, but rather funding or other assistance spread over five or so years.

There are other programmes which would fall more into the social investment category. For example, TRIDENT, a township skills empowerment programme. It provides a course in basic management skills, and hopes to reach 7000 people in the next two to three years. Working capital for the project was obtained through a loan from a life office. Interest on the loan is being capitalised at below market rates.

Several home financing options, such as Homefunder, are offered by financial institutions and larger retirement funds. These schemes allow retirement fund members to use their **withdrawal benefit** as collateral for a housing loan. The Pension Fund Act makes provision for members to borrow from the fund for the purposes of purchasing or improving a home. The loan may not exceed the withdrawal benefit to which the member is entitled, and interest must be charged on the loan (Pension Fund Act, 1969).

Many of the life offices also have property investments in the townships, although these are in retail space, not in low income housing. These developments do, however, provide positive externalities which may stimulate affordable housing construction. As pointed out by the PEOPLES Association (PEOPLES, 1995) "much of the problem facing low-income communities.....is not so much the lack of income as the outflow of capital from the community...the erosion of the economic base leads to a deterioration of public infrastructure and services as resources are directed to area with greater economic and political strength". The shopping centres, anchored by large retailers, are a first step in building an economic base in disadvantaged communities. The centres provide formal premises for local traders, and the

larger retailers can supply local jobs. The larger the proportion of community income which can be spent within the community, the greater the stimulus for further development. There is enormous potential for partnerships between the private sector, Government and communities to enable the communities to become more integrated into the economic mainstream. A good example of such a co-operative project is the PEOPLES Project in the Lower East Side of Manhattan, New York City (PEOPLES, 1995) .

6.3.2 INDIRECT INVOLVEMENT

There was consensus among interviewees that individual institutions lack both the manpower and the expertise to be directly involved in development projects. Therefore, they would prefer to make investments through credible organisations with expertise in the area, community support and a good track record. Investment managers indicated that low returns were acceptable to a point, but that the institutions had limited capital of their own which could absorb the differences in returns between social and other investments. It was also pointed out that returns could be sacrificed initially, in order to get a project going, provided that long term returns were market related. As mentioned previously, provided that the proportion of the portfolio channelled to development projects is small, overall returns should be minimally affected. Furthermore, such projects are necessary to facilitate the emergence of the "middle class" stressed by the New Africa Fund.

The most common organisations supported were READ, the Urban Foundation, Joint Education Trust, Development Bank, South African Housing Trust, the SBDC, Eden Trust, Get Ahead Foundation, Grassroots Educare Trust, Triple Trust, the Foundation for Entrepreneurship Development, the Rural Foundation, SA Free Market Foundation, Promat and various health and welfare organisations. Tertiary education institutions were also well supported.

The Life Offices Association (LOA) established an Investment Development Unit (IDU) to investigate potential socially desirable investments. Although all the member Life Offices have taken up Eskom Electrification Participation Notes in a deal arranged by the IDU, attitudes to the scheme, and the IDU, varied widely. The smaller offices contributed more in

larger retailers can supply local jobs. The larger the proportion of community income which can be spent within the community, the greater the stimulus for further development. There is enormous potential for partnerships between the private sector, Government and communities to enable the communities to become more integrated into the economic mainstream. A good example of such a co-operative project is the PEOPLES Project in the Lower East Side of Manhattan, New York City (PEOPLES, 1995) .

6.3.2 INDIRECT INVOLVEMENT

There was consensus among interviewees that individual institutions lack both the manpower and the expertise to be directly involved in development projects. Therefore, they would prefer to make investments through credible organisations with expertise in the area, community support and a good track record. Investment managers indicated that low returns were acceptable to a point, but that the institutions had limited capital of their own which could absorb the differences in returns between social and other investments. It was also pointed out that returns could be sacrificed initially, in order to get a project going, provided that long term returns were market related. As mentioned previously, provided that the proportion of the portfolio channelled to development projects is small, overall returns should be minimally affected. Furthermore, such projects are necessary to facilitate the emergence of the "middle class" stressed by the New Africa Fund.

The most common organisations supported were READ, the Urban Foundation, Joint Education Trust, Development Bank, South African Housing Trust, the SBDC, Eden Trust, Get Ahead Foundation, Grassroots Educare Trust, Triple Trust, the Foundation for Entrepreneurship Development, the Rural Foundation, SA Free Market Foundation, Promat and various health and welfare organisations. Tertiary education institutions were also well supported.

The Life Offices Association (LOA) established an Investment Development Unit (IDU) to investigate potential socially desirable investments. Although all the member Life Offices have taken up Eskom Electrification Participation Notes in a deal arranged by the IDU, attitudes to the scheme, and the IDU, varied widely. The smaller offices contributed more in

savings. However, it represented a cheap form of Government borrowing, which has had to be replaced by other methods of raising revenue, such as the direct tax on retirement funds. PA lowered returns since equities are preferred to fixed interest stocks in times of high inflation. Interviewees felt that PA's also reduced the flexibility of portfolios. Several respondents felt that the threat of reintroducing some form of prescription had been effective in spurring portfolio managers into pursuing SDI. Although all felt that collaboration was necessary to take pre-emptive action against legislation, competitiveness was seen as a stumbling block. Owing to the considerable emphasis on performance, and the assumption that social screens translate into poor performance, none of the offices wanted to be the first to become significantly involved in SDI, since it would involve tactical and financial risk. On the other hand, if ethical investing is as profitable, and perhaps more so in the long term, than conventional investing, the competitiveness issue becomes reversed. Managers who resist social screening may lose market share to local and foreign funds (such as Calvert) who capitalise on a growing ethical market. Some managers are waiting until substantial Government pressure is placed on them before taking further action, so that they avoid the risk of running ahead of others in the industry. For this reason, it was felt by some that prescription might be the only alternative, and that provided prescription was mild, current initiatives would not be abandoned. One interviewee was opposed to PA not only because they were a very binding strategy constraint, but also because they easily become a political vehicle, as in Zimbabwe, and can be very detrimental to the economy.

From the survey it is evident that, in general, financial institutions are reluctant to commit themselves to SDI on any significant scale. This reluctance may in part be attributable to the problems of definition i.e. a focus on social upliftment projects, rather than ethical investing, as alluded to in chapter one. The larger the institution, the more hesitant it seems. Although there is consensus that prescribed assets were detrimental, there is little co-operation between institutions to avoid their re-introduction. In fact, there is some support for prescribed assets as a means of levelling the playing field.

6.3 CASE STUDIES

6.3.1 COMMUNITY GROWTH FUND

The Community Growth fund was launched in 1992, initiated by Unity, a group comprising seven trade unions. The fund is managed by Syfrets Managed Assets, and the Labour Research Service (LRS) conducts the necessary research to approve investments. Syfrets select the initial assets according to financial suitability, and these are then 'screened' by the LRS according to 17 social responsibility criteria. The social research conducted by the LRS causes a delay in taking up investments, by which time they may no longer seem as financially attractive. For example, by the end of 1992, 19 shares had been approved for investment but only 11 had been taken up. By 1993, the approved shares had increased to 21. There is a need for an independent research organisation, which provides up to date information on a variety of firms on a regular basis. This would reduce the lag between selection and implementation of investment decisions.

Each criterion is weighted according to its importance to the unions. A firm must achieve a minimum total score to be approved. The criteria, which are a combination of positive and negative screens, are listed below :

- Jobs - companies should place a high priority on employment creation
- Industrial Relations - companies with a clear anti-union policy will be rejected, while companies with positive reports on their industrial relations practices will score highly.
- Conditions of employment - companies paying the highest wages in their industries will be favourably scored. Other factors such as maternity benefits and retirement provision are also important
- Training - companies which provide training, especially for black employees, will score well
- Equal opportunity for women - women must be well represented in senior positions
- Health & safety - this should be a primary concern, and worker representatives must participate in health and safety decisions. NOSA reports and ratings will be considered
- Product - companies producing and marketing products which have a clear, detrimental effect on people or the environment will be rejected (this criterion includes tobacco products and armaments)

- Privatisation - the CGF will not invest to allow privatisation to take place, reflecting the union stance
- Profit retention - companies with a policy and record of fixed asset expansion, and which re-invest profits for this purpose will be favourably considered
- Affirmative action - companies must have a measurable policy to ensure black workers have opportunities for advancement
- Location - companies must be locally based, unless foreign firms can demonstrate benefits to South Africans, for example through job creation
- Environment - companies must place a high priority on environmental management, and establish policies and programmes for conducting operations in an environmentally sound manner
- Worker participation - companies need to work closely with unions and place a high priority on effective worker participation in those areas affecting the lives and working conditions of employees
- Disclosure - necessary for proper assessment of social responsibility
- Political profile - companies must not use shareholders' money to promote managers' political objectives, particularly where this conflicts with union policies
- Social spending - companies must be visibly committed to the welfare of the broader community through a social spending programme
- Racial discrimination - there should be a measurable policy to eliminate racial discrimination, and promote equality in the workplace

The criteria selected tend to reflect good business practice, which should arguably be included in any normal investment assessment. Particularly in South Africa at present, issues such as affirmative action, good industrial relations, training and so on are likely to affect profitability through industrial action, worker productivity and company image.

Portfolios with companies selected according to such criteria might be expected to perform as well as 'conventional' portfolios. In its first 6 months, the Community Growth Fund earned a return of 8%, which compared "favourably with the JSE All Share Index decline of 11.9% and inflation of 5.1%" (CGF Annual Report, 1992). In the report, the results are not compared to those of other managed portfolios. It should be noted that at that stage the portfolio was heavily biased in favour of cash with 68.21% in liquid assets, 27.75% in

Industrials and 4.04% in Financials. The LRS subsequently conducted an analysis to determine the earning potential of the equity component of the portfolio. This 'hypothetical' portfolio was compared to the Syfrets Growth Fund Portfolio, the Old Mutual Investors Fund and the JSE Overall Index (LRS, 1993). The study found that the 'approved' CGF portfolio outperformed the 'complete' CGF portfolio (constituting all shares investigated by the LRS). A portfolio constructed from the shares rejected, under-performed both the approved and complete CGF portfolios, which "indicates that the socially responsible criteria adopted by Unity.....successfully manages to weed out weakly performing firms" (LRS, 1993). Although the analysis was based on constructed portfolios, whereby the composition of the portfolio was taken to be constant over the period reviewed and all shares were given an equal weighting, it does suggest that ethical investing in the South African market can be profitable. More recently, the full CGF portfolio has outperformed the Syfrets Growth portfolio.

6.3.2 COMMUNITY BUILDER

Community Builder was launched by Sanlam towards the end of 1994, after discussions with various interest groups. The main stimulus behind the fund was developing the labour union market, but the fund is open to all retirement funds not only those of labour unions. The timing of the development of the product is politically influenced - during the build up to democratic elections the RDP became very fashionable in many circles, and demand for "RDP friendly" increased. Discussions between brokers, investors and financial services institutions ensued, and a few products, including Community Builder were born. The purpose of the fund is to allow retirement funds to invest in the RDP through carefully selected securities. The stated aim of the portfolio is to "provide an investment channel through which investors can help to bring about growth and stability in socio-economically deprived communities". Some of the multiplier effects of such an investment are inter alia

- providing shopping facilities closer to developing communities from where the boom in consumer demand will come
- raising the standard of living in poorer communities
- supporting emerging entrepreneurs by providing much needed premises
- creating jobs in impoverished areas by facilitating employment of local labour in construction and in retail stores
- community projects often arise as a by-product of such development

- contributing directly to improved infrastructure through, for example, electrification and improved transport services

The portfolio carries no maximum or minimum investments. Sanlam's in-house investment research team is responsible for researching potential assets for inclusion in the portfolio, although outside expertise may be sought where necessary. The portfolio does not have a formalised set of screens as yet, but is planning to introduce these in the first quarter of 1996. However, some type of screening must be being utilised to identify "RDP-friendly" investments.

In its first year, Community Builder focused exclusively on property investments. This has been changed by adding two more portfolios with a variety of investments, in order to broaden support for the RDP, and to provide a responsible portfolio which complies with the investment restrictions prescribed by the Pension Fund Act. . The primary focus on property development in disadvantaged areas remains, although it is commercial rather than residential property. For example, the portfolio includes Giyani Plaza, Westgate Mall in Mitchells Plain, 0Seshogo Plaza, the Khayelitsha Shopping Centre, Chatsworth Shopping Centre and Kwagga Plaza. One of the other portfolios contains 50% property and the third 25% property, with the remainder consisting of "RDP friendly" shares, fixed interest instruments and cash. Such alternative investments could include Eskom's Electricity Participation notes and other bond issues to finance social upliftment.

Sanlam defines RDP friendly as "assets that can make a contribution to the reconstruction and development of the country, communities, infrastructure and economy, focusing on the needs of the underdeveloped communities" (Kruger, 1996). They view the official RDP as a subset of this definition. Portfolio managers believe that the Khayelitsha Shopping Centre shows that it is possible to develop viable facilities in underdeveloped communities. Townships have always been considered high risk, low return investments owing to violence and the ethic of non-payment. However, these are expected to change, and with the anticipated boom in the townships, Community Builder can be expected to do well, certainly in the longer term.

In its first nine months of operation, Community Builder posted a return of 28%. Performance for the 1995 calendar year was 31,3%. Sanlam believes that the careful selection

- contributing directly to improved infrastructure through, for example, electrification and improved transport services

The portfolio carries no maximum or minimum investments. Sanlam's in-house investment research team is responsible for researching potential assets for inclusion in the portfolio, although outside expertise may be sought where necessary. The portfolio does not have a formalised set of screens as yet, but is planning to introduce these in the first quarter of 1996. However, some type of screening must be being utilised to identify "RDP-friendly" investments.

In its first year, Community Builder focused exclusively on property investments. This has been changed by adding two more portfolios with a variety of investments, in order to broaden support for the RDP, and to provide a responsible portfolio which complies with the investment restrictions prescribed by the Pension Fund Act. . The primary focus on property development in disadvantaged areas remains, although it is commercial rather than residential property. For example, the portfolio includes Giyani Plaza, Westgate Mall in Mitchells Plain, 0Seshogo Plaza, the Khayelitsha Shopping Centre, Chatsworth Shopping Centre and Kwagga Plaza. One of the other portfolios contains 50% property and the third 25% property, with the remainder consisting of "RDP friendly" shares, fixed interest instruments and cash. Such alternative investments could include Eskom's Electricity Participation notes and other bond issues to finance social upliftment.

Sanlam defines RDP friendly as "assets that can make a contribution to the reconstruction and development of the country, communities, infrastructure and economy, focusing on the needs of the underdeveloped communities" (Kruger, Interview). They view the official RDP as a subset of this definition. Portfolio managers believe that the Khayelitsha Shopping Centre shows that it is possible to develop viable facilities in underdeveloped communities. Townships have always been considered high risk, low return investments owing to violence and the ethic of non-payment. However, these are expected to change, and with the anticipated boom in the townships, Community Builder can be expected to do well, certainly in the longer term.

In its first nine months of operation, Community Builder posted a return of 28%. Performance for the 1995 calendar year was 31,3%. Sanlam believes that the careful selection

of assets, with attention paid to both financial and social value, will minimise the risk of below average returns for investors. A senior portfolio manager is responsible for the daily running of the fund, including the selection of assets for inclusion.

6.3.3 FUTUREGROWTH

Southern Life's socially responsible portfolio is called Future Growth and invests in a range of socially responsible projects including property developments in Nyanga, CHIPs (Collateralised Housing Investment Paper) and Eskom's Electricity Participation Notes.
Information was requested from Southern Life regarding Futuregrowth, but they did not respond.

6.3.4 SECHABA

Fedlife did not respond to requests for information regarding their ethical fund.

CONCLUSIONS

Inherent problems in testing the CAPM make it difficult to establish whether the apriori predictions of the model are incorrect. Ethical portfolios may perform better than the benchmark used in the empirical studies, but this benchmark is unlikely to be the 'true' market portfolio. Perhaps the choice of benchmark portfolio is 'incorrect', rather than the predictions of the model being wrong. However, this applies equally to conventional investing. Ethical portfolios can perform better than the benchmarks against which conventional portfolios are measured, and this is the core of the performance debate. The use of ethical benchmarks such as the Domini 400 or Citizens indices may be more appropriate for evaluating the relative performance of ethical portfolios. The ethical and conventional indices can then be compared. Although the data is limited some important guidelines or conclusions can be drawn from the evidence.

Table 7.1 below summarises what the CAPM implied the effects of ethical investing would be, and what the data shows. It should be borne in mind that the majority of empirical studies reviewed in chapter four, concentrated on only one social issue - excluding companies with ties to South Africa. Application of this criteria often excluded entire sectors. Modern ethical portfolios have broader objectives, and are less likely to exclude entire sectors which would allow for greater diversification than in the divestment portfolios of the nineteen eighties.

The table shows that, although the investment universe is reduced as predicted by the CAPM, this does not automatically result in lower returns or higher risk. Three of the studies reviewed in chapter four found that screening portfolios increased risk. One of these found that risk had increased for only five of the seventeen portfolios analysed, which is only 29% of the sample. Both ethical indices examined in chapter five showed marginally more risk, with betas insignificantly greater than 1. In terms of returns, the findings of the empirical studies are inconclusive - two studies reported that screened portfolios outperformed the benchmark used, and two studies reported the opposite. The data presented in chapter five suggests that, with careful selection and monitoring, ethical portfolios can perform better than non-screened portfolios.

Table 7.1 : Summary of Theoretical Predictions and Evidence for Ethical Portfolios

	Investment Universe	**Portfolio Returns**	**Portfolio Risk**
The CAPM	Reduced universe from which to select securities.	The market portfolio is unobtainable, therefore portfolios cannot lie on the CML, and returns will be lower than the market.	As the number of securities increases, risk declines. Implies that fewer securities leads to higher risk. Unsystematic risk cannot be diversified away with a reduced universe.
Empirical Studies (chapter four)	Ennis & Parkhill : 52% of the S&P would be excluded (i.e SA related) Wagner et al : replacing SA related firms gives universe less than 62% of S&P Grossman and Sharpe : relatively small reduction	Grossman & Sharpe : risk adjusted portfolio outperformed the NYSE over a 20 year period Rudd : SA-free portfolio underperformed S&P by 0.037% Tepper : 12 mutual funds underperformed over a 6 year period Hamilton et al: 15 out of 17 portfolios performed no different to the NYSE, 1 performed better and 1 worse between 1981-1990; no difference between conventional and ethical portfolios	Wagner : portfolio consists of smaller companies which are generally riskier - new universe has 8% more risk, and 3& less diversification Ennis & Parkhill : can construct SA-free portfolio no riskier than S&P 500 Hartman et al: 5 out of 17 portfolios had beta>1 Rudd : disinvestment increases risk by 2-3% Grossman & Sharpe : universes had similar betas
UK and US Experience (chapter five)	UK : 60% of the UK stock market is excluded, including 80 of the largest companies Domini Index : retains 64% of the S&P 500 Citizens Index : retains 67% of the S&P 500	UK : ethical trusts outperformed all trusts over two thirds of the period studied ; Friends Provident outperformed the pension fund average over a 9 year period US: ethical average exceeded the S&P for the 5 years to mid 1994, but not to mid 1995 Both the Domini and Citizens Indices outperformed the S&P 500	Domini Index : beta = 1.06 Citizens Index : beta =1.07 both relative to the S&P 500

Clearly ethical investing reduces the opportunity set or investment universe, but there are conflicting opinions as to the effect of this on performance. The evidence presented above does not seem to support the notion that applying social screens hinders performance. However, the effects of time period chosen for examination and the short time period for which data is available cannot be ignored.

There was some consensus in the empirical studies in chapter four that the bias towards small stocks in the divestment portfolios in the US more than compensated for any losses incurred by exclusion policies. This could be an important factor in the South African context, bearing in mind the domination of the JSE by the 'big 5', and initiatives to promote small business development. However, not all the ethical portfolios investigated in chapter five retain the small stock bias of the original divestment portfolios, but continue to perform well. Thus the focus on small firms is insufficient to explain the performance of ethical portfolios.

The sectors excluded also had a significant impact on performance. Thus ethical portfolios, as for any portfolio, should avoid excluding entire sectors, if they are to perform well. This is supported by the poor performance of the environmental funds. Although ethical investing reduces the investment universe, it is still possible to construct a well diversified portfolio.

It is undeniable that ethical investing increases costs in terms of research, transactions and management. The amount of extra cost the investor is willing to absorb in order to be politically or ethically correct should be considered. The wealth of private companies conducting research into ethical businesses, and the number of investment firms specialising in ethical investment in the US cut these costs dramatically, as there is a vast pool of expertise to draw on. The lack of experience in this arena will be a problem initially in South Africa.

The time period examined and benchmark portfolio used obviously affect measurement of relative performance. The penchant in the investment industry for simple rankings (usually focusing on the short term) of portfolios can be misleading. Portfolios differ in focus and objectives, which impacts on short term performance. Ethical portfolios may also tend to perform relatively better if compared with other managed portfolios rather than an index. However, they performed well enough against the S&P 500.

There is tremendous scope for ethical investing in South Africa to make a contribution to the funding of the RDP and providing a financial stimulus to regional development. With the move towards fiscal federalism there is scope for the introduction of provincial or even municipal bonds specifically targeting local areas of need, such as building more schools, hospitals and community centres. Unless the power to raise some taxes is also relegated to the provinces, such bonds would need to be underwritten by the Central Government. Fixed-income ethical funds could stipulate a minimum percentage to be invested in such bonds, and the percentages need not be standard across funds.

The US model whereby funds invest a certain portion of their assets in "high social impact" investments seems appropriate for South Africa. The relatively small percentage of the portfolio allocated to such investments compensates for the higher risk, as the effect on the entire portfolio of poor returns on this portion of the investment should be minimal. Such investments would be more wisely undertaken through the existing infrastructure of reputable agencies rather than directly in social-upliftment projects themselves, to offer the investor further protection. The well developed NGO sector has a vital role to play here. NGO's have identified projects, are familiar with the particular area and have established credibility with the community. Agencies such as credit unions, the SBDC and the Community Bank could be used.

Future economic growth is most likely to stem from the economic empowerment of the black population of South Africa. Social screens devised for South African funds should reflect this. The initial focus should be on equal opportunity in the workplace, skills upgrading and small business development to generate income if a "middle class" is to be created. The US and UK funds began predominantly as divestment funds, and evolved to include the range of social issues they currently have. South African funds should follow this route, beginning with a small range of critical issues, and expanding as the economy develops. It seems more useful to concentrate on positive screens with a few, carefully targeted negative screens. For example, excluding weapons manufacturers from a portfolio will not end the taxi violence or the violence in Kwa-Zulu Natal, but it is a positive gesture which may help make weapons more difficult to obtain.

Rapid growth in ethical investing was experienced in the UK and the US during the 1980's. "Popular wisdom suggests that investors following this strategy may be trading off economic returns for psychic utility" (Herremans et al, 1993,p 587). The results presented above do not support such a trade-off. On the contrary they suggest that it is possible to 'invest with a conscience' and earn market returns. Theory has failed to provide a clear, empirical relationship between corporate social responsibility and economic performance. Although corporate social responsibility may mean incurring additional costs and sacrificing short-term profit opportunities, these may be offset by gains in efficiency, market image and more sustainable operations. Herremans et al (1993, p588) cite eleven studies which have demonstrated a positive relationship between corporate social responsibility and accounting measures of performance. One study attributed this to the superior management required to adopt a proactive social policy.

In an efficient market, security prices should reflect all available information. Therefore, there should be no variance in returns expected based on differences in corporate social responsibility unless the economic significance of this factor changes. Herremans et al (1993) found that investors do take cognisance of differences in perceived corporate social responsibility, and it is becoming increasingly important. As legislation becomes more stringent, the costs of irresponsibility will increase, which will in tun affect share prices.

If the criteria adopted focus on sustainable business practices, as outlined previously, yet cannot generate a sufficiently diversified universe of profitable investments it is a serious indictment of South African business, rather than the ethical approach. There is a need for an independent research service to monitor firms and provide regular ethical ratings, based on clearly stated criteria.

7.1 RECOMMENDATIONS FOR FURTHER RESEARCH

When more data becomes available, rigorous analysis should be conducted to try and determine critical success factors for ethical investing. The relationship between performance and management or factors other than social agenda needs to be examined.

It would be useful to construct an ethical index for South Africa, for comparison against the more conventional indices and to provide a benchmark against which to measure ethical portfolios.

Models should be evaluated for forming partnerships between Government and the private sector to stimulate the development of previously disadvantaged communities.

APPENDIX A

South African Council of Churches Code of Conduct - a set of Socially Responsible Business Guidelines

- Equal Opportunity - companies should ensure that operations are free from discrimination, and implement affirmative action programmes to protect the rights of the historically disadvantaged
- Training and Education - companies should develop and implement programmes to increase the productive capacities of employees, in consultation with the Trade Union movement
- Worker's Rights - companies should recognise representative unions and uphold employees' rights to organise, bargain, picket peacefully and strike without intimidation
- Working and Living Conditions - companies should maintain a safe and healthy work environment to strive to ensure that working and living conditions accord with relevant international conventions
- Job Creation and Security - companies should strive to maintain productive employment opportunities and create new jobs for South Africans
- Community Relations - companies should share information about their practices and projected plans with communities affected by their operations, and develop social responsibility programmes in ongoing consultation with these communities
- Consumer Protection - companies should inform consumers of any possible dangers associated with their products and co-operate with consumer protection and broader community organisations to develop and uphold appropriate product safety and quality standards
- Environmental Protection - companies should utilise environmentally sound practices, disclose disposal information and seek to minimise hazardous waste
- Empowerment of Black Business - companies should strive to improve the development of black-owned South African business through purchasing and sub-contracting

APPENDIX B

Companies in the Citizens Index as of 14/2/96

ADC Telecommunications
Advanced Micro Devices Inc.
Air Products and Chemicals Inc.
Alco Standard Corporation
Altera Corporation
Amdahl Corporation
American Express Copany
American Greetings Corporation
American Power Conversion
AMP Inc.
Apogee Enterprises Inc.
Armstrong World Industries Inc.

Automatic Data Processing
Avnet
Bandag Inc.
Bankers trust New York Corporation
Barnett Banks Inc.
Bell Atlantic Corporation
BellSouth Corporation
Beneficial Corp.
Betz Laboratories Inc.
Block, H&R
Broderbund Software
Bruno's Inc.
California Energy Company
Campbell Soup Company
Caraustar Industries Inc.
CBS Inc.
Centex Corporation
Chubb Corporation
Cincinnati Milacron
Cisco Systems Inc.
Coleman Company
Comcast Corporation
Compaq Computer Corporation
Consolidated Natural Gas Corporation
Cooper Tyre & Rubber Company
CPC International
Davidson & Associates
Deere & Company
Deluxe Corporation
Dialogic Corporation
Dow Jones & Company

Adobe Systems Inc.
Ahmanson & Co, HF
Airtouch Communications
Alltel Corp.
ALZA Corporation
America On-Line
American General Corporation
American Medical Response
Ameritech
Antec Corporation
Apple Computer Inc.
Autodesk Inc.

Avery Dennison Corp.
Avon Products Inc.
Bank of Boston Corp.
Barnes & Noble Inc.
Belden Inc.
Bell Sports Corp.
Ben & Jerry's Homemade Inc.
Bergen Brunswig Corporation
Biomet Inc.
Boatmen's Bancshares Inc.
Brown Group Inc.
C-Cube Microsystems Inc.
Callaway Golf Company
Capital Cities/ABC Inc.
CasTech Aluminium Group
Celestial Seasonings
Charming Shoppes Inc.
Church & Dwight Co Inc.
Circuit City Stores
Coca-Cola Company
Columbia/HCA Healthcare Corporation
Community Psychiatric
Computer Associates International
Consolidated Papers Inc.
CoreStates Financial Corporation
Cummins Engine
Dean Witter, Discover & Co.
Dell Computer Corporation
Dial Corp, The
Digital Equipment Corp.
Dun & Bradstreet Corporation

Duriron Company Inc., The
Emerson Electric Co.
Enron Corporation
Fedders Corporation
Federal Home Loan Mortgage Corp.
Federal-Mogul Corporation
First Fidelity Bancorporation
Fleetwood Enterprises
Fresh Choice Inc.
Gateway 2000 Inc.
General Mills
Genuine Parts Company
Global Village Communication Inc.
Great Atlantic & Pacific Tea
Gymboree Copr.
Hannaford Brothers Company
Harland Company, John H
Harman International Industries Inc.
Hasbro Inc.
Herman Miller Inc.
Hewlett-Packard Company
ICC Technologies Inc.
Idexx Laboratories Inc.
Illinois tool Works Inc.
Inland Steel
Invacare Corporation
Jefferson-Pilot Corporation
Kellogg Company
KeyCorp
King World Productions Inc.
Kroger Company
Learning Company
Liz Claiborne Inc.
Lowe's Companies Inc.
Manor Care Inc.
Mattel Inc.
Maytag Corporation
McGraw-Hill Inc.
Mellon Bank Corporation
Merck & Co.Inc.
Micron Technology Inc.
Miller Inc., Herman
Minnesota Mining & Manufacturing
Molex Incorporated
Nalco Chemical Company
National Service Industries Inc.
Nature's Sunshine Products
Network General Corporation
NICOR Inc.

Edwards Inc.
Engelhard Corporation
Envirotest Systems Corp.
Federal Express Company
Federal National Mortgage Association
First Chicago Corp.
First Union Corp.
Fort Howard Corporation
Gap Inc., The
General Instruments
General Re Corporation
Giant Foods Inc.
Golden West Financial Corp.
Great Western Financial Corp.
Handleman Co.
Harcourt General
Harley Davidson Inc.
Hartmarx
Heinz Company
Hershey Foods Corporation
Huffy Corporation
Idex Corporation
Illinois Central Corporation
IMCO Recycling
Intel Corporation
Ionics Inc.
Jostens Inc.
Kenetech Corporation
Keystone International Inc.
Knight-Ridder Inc.
Landmark graphics
Limited Inc., The
Longs Drug Stores Corporation
Luby's Cafeteria
Masco Corporation
May Department Stores
MBNA Corporation
Medtronic Inc.
Mellville Corporation
Meredith Corporation
Microsoft Corporation
Millipore Corporation
Mobile Telecommunications Technologies Corp.
Moore Corporation Limited
National City Corporation
NationsBank Corporation
NBD Bancorp Inc.
New York Times Company
NorAm Energy

Nordson Corporation
Norwest Corp.
Nucor Corporation
Oneok Inc.
Owens & Minor Inc.
Pacific Telesis Group
Penney Co. Inc., JC
Perkin Elmer Corporation
Pitney Bowes Inc.
Polaroid Corporation
Price/Costco Inc.
Pulte Corporation
Qualcomm Inc.
Real Goods Trading Corporation
Reebok International Ltd.
Rite Aid Corp.
Rouse Company
Ryder System Inc.
SBC Communications Inc.
Schering-Plough Corp.
U.S Robotics Inc.
Unum Corporation
USLIFE
Ventritex Inc.
Vivra Inc.
Wachovia Corporation
Warnaco Group Inc.
Wells Fargo bank, NA
Whirlpool Corp.
Whole Foods Corporation
Williams Companies Inc.
Worthington Industries Inc.
Xerox

Nordstrom Inc.
Novell Inc.
Odwalla Inc.
OshKosh B'Gosh Inc.
Pacific Enterprises
Parametric Technology Corp.
Peoples Energy Corp
Physician Corporation of America
PNC Bank Corp.
Praxair Inc.
Providian Corporation
Quaker Oats Company
Raychem
Recovery Engineering Inc.
Ringer Corp.
Roadway Services
Rubbermaid Inc.
Safeco Corp.
Scherer Corp.,RP
U.S Healthcare Inc.
U.S West Inc.
USF&G
V.F Corporation
Viacom Inc.
VLSI Technology Inc.
Walgreen Company
Wellman Inc.
Western Atlas Inc.
Whitman Corporation
Wholesome & Hearty Foods Inc.
Woolworth Corporation
Wrigley, William
Yankee Energy System Inc.

APPENDIX C

Guideline Survey Questions

1. How does the company define Socially Desirable Investment?
2. Is the company directly involved in administering a scheme or through investment/co-operation with another organisation?
3. How does the scheme operate?
4. Are the expected returns "market related"?
5. What is the default rate on loans etc.?
6. How large is the scheme - in R million or percentage of income?
7. Has the scheme been operating long enough to gauge success?
8. Will the projects/programmes be broadened?
9. Were the programmes designed in consultation with the participants?
10. How well are the objectives or operations of the scheme explained to those benefiting?
11. Is there an SDI budget, or where is the money allocated from?
12. Are projects treated as investments or donations?
13. Are SDI seen as separate from normal investments or are the same criteria used. If so, why were they not initiated earlier?
14. Are current initiatives likely to continue if some form of prescription is re-introduced.
15. Opinions on SDI?

APPENDIX D

Companies Surveyed

*SANLAM	*NEDBANK
*OLD MUTUAL	*STANDARD BANK
*METROPOLITAN LIFE	*SYFRETS MANAGED ASSETS
*SOUTHERN LIFE	BOARD OF EXECUTORS
*NORWICH LIFE	*U.A.L
*FEDLIFE	*RAND MERCHANT BANK

ABSA (UNITED BANK, TRUST BANK, PERM)

* indicates replies received to initial contact.

INTERVIEWEES

JACQUES LOUBSCHER	SENIOR MANAGER : INVESTMENTS
WILLIE VAN DER WALT	MANAGER : PUBLIC AFFAIRS (SANLAM)
DOUW KRUGER	CHIEF CONSULTANT: GROUP BENEFITS, PRODUCT DEVELOPMENT (SANLAM)
LIONEL HARTMANN	MANAGER : CORPORATE PUBLIC RELATIONS OLD MUTUAL
ISAK MOSTERT	INVESTMENTS (OLD MUTUAL)
LOUIS FOURIE	GENERAL MANAGER : INVESTMENTS NORWICH LIFE
IAN HAMILTON	MANAGER (SYFRETS MANAGED ASSETS)
ASIEF MOHAMED	INVESTMENT ANALYST : INVESTMENTS METROPOLITAN LIFE
PHIL SOLOMON	MANAGER : PUBLIC RELATIONS METROPOLITAN LIFE
DAVE GEARY	INVESTMENT DEVELOPMENT UNIT LIFE OFFICES ASSOCIATION

RESPONDENTS (FOREIGN)

JOHN LEWIS	NATIONAL FEDERATION OF COMMUNITY DEVELOPMENT CREDIT UNIONS
MARGARET HUTCHINS	EXECUTIVE ASSISTANT, CITIZENS TRUST
PATSY MICKENS	PROGRAMME ASSOCIATE, NATIONAL
ASSOCIATION OF	COMMUNITY DEVELOPMENT LOAN FUNDS
CRAIG VAN HOLZEN	VICE PRESIDENT, RESEARCH, AFFIRMATIVE FINANCIAL NETWORK
WILLIAM PARIS	SOCIALLY RESPONSIBLE BUSINESS DISCUSSION GROUP
STEVE LYDENBERG	KINDER, LYDENBERG AND DOMINI
SUBSCRIPTIONS DEPARTMENT	THE CALVERT GROUP

APPENDIX E

Underlying Data for United States Ethical Portfolios

FUND NAME	LAUNCH DATE	TYPE OF FUND	SOCIAL RATING	1 YR mid 1994	5 YR mid 1994	1 YR mid 1995	3 YR mid 1995	5 YR mid 1995
PAX WORLD FUND	Aug-71	B	B+	-3.4	**7.4**	18.9	**5.7**	**7.7**
DREYFUS 3RD CENTURY	Mar-72	G	C-	-3.3	**8.9**	19.5	9.1	8.8
NEW ALTERNATIVES FUND	Sep-82	E	B+	-7	2.9	14.1	7.4	6.1
CALVERT SOCIAL MANAGED GROWTH	Oct-82	B	A-	-1.9	6.7	15	8.1	8.1
PARNASSUS FUND	Mar-85	G	A-	**4.4**	**11.1**	**31.4**	**23.6**	**19**
CALVERT SOCIAL BOND	Nov-86	I	A-	-1.5	**8.1**	10.4	7.2	9
CALVERT ARIEL GROWTH	Nov-86	G	C	**5.5**	6.7	9.3	7.8	6.7
CALVERT SOCIAL EQUITY	Aug-87	G	A-	-3.9	5.6	6.7	4.4	4.5
CALVERT ARIEL APPRECIATION	Jan-90	G	B-	7	NA	5.6	7.5	7.7
PROGRESSIVE ENVIRONMENT	Feb-90	E	B+	-11.5	NA	-3.7	-1.3	-6.7
TIAA/CREF SOCIAL CHOICE[18]	Mar-90	B	NR	-0.3	NA	19.4	**11.8**	**11.6**
RIGHTIME SOCIAL AWARENESS	Mar-90	G	B-	-6.6	NA	12.9	8.9	7.5
DOMINI SOCIAL EQUITY	Jun-91	G	B	0.2	NA	**24.6**	**12.9**	
GREEN CENTURY	Mar-92	B	B+	-3.8	NA	15	4.7	
LAIDLAW COVENANT FUND	Mar-92	G	C	**1.3**	NA	22.5	**11.1**	
CITIZENS BALANCED	Jun-92	B	A-	-4.2	NA			
CITIZENS GROWTH	Jun-92	G	A-	-3.1	NA			
CITIZENS INCOME	Jun-92	I	A-	0	NA	10.5	6.7	
MUIR CALIF TAX-FREE	Jun-92	I	A-	-1.8	NA	5.1	4.9	
CALVERT WORLD VALUES GLOBAL	Jul-92	GL	B+	**18.7**	NA	1.3		
PARNASSUS BALANCED	Jul-92	B	A-	**7.3**	NA	21		
PARNASSUS CALIFORNIA TAX-FREE	Jul-92	I	A-	-0.3	NA	8.7		
PARNASSUS FIXED	Jul-92	I	A-	-4.7	NA	15.8		

[18] This is a college retirement fund, so has eligibility criteria.

INCOME								
US AFFINITY GREEN FUND	Nov-92	G	C	**4.9**	NA			
PRO-CONSCIENCE WOMENS EQUITY	Oct-93	G	B	NA	NA	5.1		
MMA PRAXIS GROWTH	Jan-94	G	B	NA	NA	23.6		
MMA PRAXIS INTERMEDIATE INCOME	Jan-94	I	B	NA	NA	11.8		
CITIZENS EMERGING GROWTH	Feb-94	G	A-	NA	NA	23.2		
CITIZENS GLOBAL EQUITY	Feb-94	GL	A-	NA	NA	9.8		
NEUBERGER & BERMAN SOCIALLY RESPONSIBLE FUND	Mar-94	G	B-	NA	NA	19.9		
CALVERT STRATEGIC GROWTH	May-94	G	C	NA	NA			
average				-0.33	**7.175**	13.98	8.04	7.13
average growth and balanced funds				**1.275**	**7.733**	16.04	9.63	8.75
S&P 500				0.79	6.8	23.76	10.22	9.47

Source : various

BIBLIOGRAPHY

ABDULLA, I (1993) : "THE ANALYSIS OF THE EQUITY COMPONENT OF THE COMMUNITY GROWTH FUND" LABOUR RESEARCH SERVICE, WORKING PAPER, JUNE 1993, CAPE TOWN

ANONYMOUS "PORTFOLIO SELECTION: A NON-TECHNICAL OVERVIEW". IAJ AUGUST 1977

ACTUARIAL SOCIETY OF SOUTH AFRICA (1987) : "SOUND INVESTMENT PRINCIPLES FOR PENSION FUNDS" PRODUCED AT THE REQUEST OF THE REGISTRAR OF PENSION FUNDS

ADAMS, ANDREW (1989) : INVESTMENT, GRAHAM AND TROTMAN, LONDON, 1989.

AGBOLA T (1991) : "MOBILISATION OF FINANCE FOR RURAL HOUSING DEVELOPMENT IN NIGERIA" JOURNAL OF INTERNATIONAL DEVELOPMENT, OCT 1991 VOL 3(5)

ALEXANDER G.J AND BUCHHOLZ R..A (1978) : "CORPORATE SOCIAL RESPONSIBILITY AND STOCK MRKET PERFORMANCE" ACADEMY OF MANAGEMENT JOURNAL 1978 PP479-486

ALEXANDER G.J AND FRANCIS J.C (1986) : "PORTFOLIO ANALYSIS" 3RD EDITION, CH2, PRENTICE-HALL

AMBACHTSHEER K : "PENSION FUND ASSET ALLOCATION : IN DEFENSE OF A 60/40 EQUITY/DEBT ASSET MIX". FINANCIAL ANALYSTS JOURNAL, VOL 43, SEPT/OCT 1987

ANDERSON M (1991) : PRODUCTIVE INVESTMENTS FOR ECONOMIC GROWTH : PROPOSAL FOR A NATIONAL INVESTMENT BOARD. UNPUBLISHED PAPER, LRS, CAPE TOWN

ANDREWS S : "THE CHANGING PROFILE OF PENSIONS IN AMERICA" EMPLOYEE BENEFIT RESEARCH INSTITUTE, 1985, PP217 - 226.

ARIOVICH G AND KENNEY H. F (1991) : "KRUGERRANDS AS INVESTMENTS" STUDIES IN ECONOMICS AND ECONOMETRICS, VOL 15(1) 1991

ASHER A (1991) : "SALARY LINKED HOME FINANCE: AN ECONOMIC APPROACH TO SOCIAL INVESTMENT". MIMEO

AUPPERLE K.E , CARROL A. R, ARCHIE B AND HATFIELD J.D : "AN EMPIRICAL EXAMINATION OF THE RELATIONSHIP BETWEEN CORPORATE SOCIAL RESPONSIBILITY AND PROFITABILITY" ACADEMY OF MANAGEMENT JOURNAL 1985 PP446-463

BALKENHOL BERND (1990) : "GUARANTEEING BANK LOANS TO SMALLER ENTREPRENEURS IN WEST AFRICA" INTERNATIONAL LABOUR REVIEW, VOL 129, NO 2, 1990

BARRO R.J (1978) : "SOCIAL SECURITY AND PRIVATE SAVING - EVIDENCE FROM US TIME SERIES." IN STUDIES IN SOCIAL SECURITY AND RETIREMENT POLICY, WASHINGTON, AMERICAN ENTERPRISE INSTITUTE.

BENFIELD B : "LIFE ASSURANCE LEGISLATION : THE FOLLY OF '43". AFRICAN INSURANCE AND FINANCE RECORD, JUNE 1988.

BHADURI A : EMPLOYMENT AND LIVELIHOOD - THE RURAL LABOUR PROCESS AND THE FORMULATION OF DEVELOPMENT POLICY. ILR, VOL 128, NO 6, 1989

BLAKE D (1991) : "TESTING A NON-LINEAR MODEL OF PORTFOLIO BEHAVIOUR WITH TIME VARYING EXPECTATIONS AND RISKS : THE CASE OF UK PRIVATE PENSION FUNDS" APPLIED FINANCIAL ECONOMICS, MARCH 1991 VOL 1(1)

BLAKE, (DATE UNKNOWN) : PORTFOLIO ANALYSIS AND ASSET PRICING, CHPT 13, MIMEO

BLAU F AND GRAHAM J : BLACK- WHITE DIFFERENCES IN ASSET AND WEALTH COMPOSITION. QUARTERLY JOURNAL OF ECONOMICS, MAY 1990, PP 321-341

BLOCK F (1990) : "PERSONAL SAVINGS REEXAMINED" JOURNAL OF POST-KEYNESIAN ECONOMICS, FALL 1990 VOL 13(1)

BLONDEL A : "SOCIAL PENSIONS AND GRANTS" CLAREMONT, FOUNDATION FOR SOCIAL DEVELOPMENT.

BODIE Z AND SHOVEN J (EDS) (1983) : "FINANCIAL ASPECTS OF THE US PENSION SYSTEM" UNIV. OF CHICAGO PRESS

BODIE, SHOVEN AND WISE (1987) : ISSUES IN PENSIONS ECONOMICS , University Of Chicago Press

BRISSON, SINGER AND BEEBOWER (1991) : "DETERMINANTS OF PORTFOLIO PERFORMANCE" FINANCIAL ANALYSTS JOURNAL, MAY/JUNE 1991

BROWN JOAN C : "OCCUPATIONAL BENEFITS AS SOCIAL SECURITY" LONDON, POLICY STUDIES INSTITUTE, 1985.

BROWN MARJ : "THIS MONEY WILL BE USED TO BURY ME: THE CURRENT STATE OF BLACK PENSIONS IN SA" BLACK SASH NATIONAL ADVICE OFFICE, 1990.

BRUYN S (1987): THE FIELD OF SOCIAL INVESTMENT. CAMBRIDGE UNIVERSITY PRESS, CAMBRIDGE.

BULOW J AND SCHOLES M : "WHO OWNS THE ASSETS IN A DEFINED BENEFIT PENSION PLAN?" IN SHOVEN AND WISE (1983) FINANCIAL ASPECTS OF THE US PENSION SYSTEM

BURROUGHS E (1990) : "ADDING AN ELEMENT OF CONSCIENCE INTO INVESTMENT PLANNING" PENSIONS WORLD, VOL 26, NO 6, PP 30-35

CARGILL J (1991) : "PENSION BATTLE: GROWING DEMANDS FOR PRESCRIBED INVESTMENTS TO HELP FUND 'NEW S.A'". FINANCE WEEK, 13-19 JUNE

CHAPPELL P : "THE TYRANNY OF OCCUPATIONAL PENSIONS" ECONOMIC AFFAIRS, VOL 11, NO1, OCT/NOV 1990

COPELAND T.E AND WESTERN J.F (1983) : "FINANCIAL THEORY AND CORPORATE POLICY" 2ND EDITION, ADDISON-WESLEY, MASSACHUSSETS

DE WET G AND SCHOEMAN N (1990) : "THE ROLE PLAYED BY LIFE ASSURERS IN SAVING AND INVESTMENT IN SOUTH AFRICA". UNPUBLISHED PAPER, DEPT OF ECONOMICS, UNIVERSITY OF PRETORIA

DEATON A (1991) : "SAVING AND LIQUIDITY CONSTRAINTS" ECONOMETRICA

DEATON A.S (1990) : " SAVING IN DEVELOPING COUNTRIES" WORLD BANK ECONOMIC REVIEW SPECIAL ISSUE - PROCEEDINGS OF ANNUAL WORLD BANK CONFERENCE ON DEVELOPMENT ECONOMICS.

DERTHICK M (1979) : "POLICYMAKING FOR SOCIAL SECURITY" THE BROOKINGS INSTITUTE, WASHINGTON.

DIETZ P (1966) : "PENSION FUNDS: MEASURING INVESTMENT PERFORMANCE." GRADUATE SCHOOL OF BUSINESS COLUMBIA UNIVERSITY AND THE FREE PRESS.

DOMINI A (1984) : "ETHICAL INVESTING". ADDISON WESLEY PUBLISHING CO, USA

DORRINGTON R : "RETIREMENT PROVISION AND POVERTY IN OLD AGE". TRUSTEE DIGEST JULY 1990 PP12-14

DORSEY S (1987) : "THE ECONOMIC FUNCTION OF PRIVATE PENSIONS" JOURNAL OF LABOUR ECONOMICS, 5, 1987 S171 - 189

DORSEY S (1990) : "UNION AND NON-UNION DIFFERENCES IN PENSION FUND INVESTMENTS AND EARNINGS". INDUSTRIAL AND LABOUR RELATIONS REVIEW, VOL 43, NO 5, PP542-555

DOW J AND OLSON L (1991) : "AN ANALYTICAL SOLUTION TO A STOCHASTIC CONSUMPTION/SAVING PROBLEM WITH LIQUIDITY CONSTRAINTS" SOUTHERN ECONOMIC JOURNAL, OCT 1991 VOL 58(2)

DU PLESSIS H.I " "NOTES ON THE CHARACTERISTICS AND PERFORMANCE OF SOME S.A MUTUAL FUNDS". IAJ, NO 5, DEC 1974

ECONOMIST, THE :"ETHICAL INVESTING : MORALS MAKETH MONEY", SEPTEMBER 3RD, 1994, 76-77

ENNIS, RICHARD AND PARKHILL, ROBERTA : "SOUTH AFRICAN DIVESTMENT : SOCIAL RESPONSIBILITY OR FIDUCIARY FOLLY?". FINANCIAL ANALYSTS JOURNAL, JULY/AUG. 1986, 30-37.

FAMA EUGENE (1969) : " RISK AND THE EVALUATION OF PENSION FUND PORTFOLIO PERFORMANCE" BANK ADMINISTRATION INSTITUTE.

FANNING D (ED) (1981) : "PENSION FUNDS: ISSUES IN ACCOUNTING AND FINANCE" MCB PUBLICATIONS

FELDSTEIN M (1974) : "TOWARD A REFORM OF SOCIAL SECURITY." THE PUBLIC INTEREST, VOL 40, SUMMER 1975 PP.75 - 95.

FISCHER S : "INVESTING FOR THE SHORT AND THE LONG TERM". IN SHOVEN AND WISE (1983), FINANCIAL ASPECTS OF THE US PENSION SYSTEM

FLOQUET W.T (1981) : "THE CASE FOR EQUITIES." THE INVESTMENT ANALYSTS JOURNAL VOL 17 APRIL 1981, PP 9 - 22.

FREEMAN A. M (1991) : "WELFARE MANAGEMENT AND THE BENEFIT COST ANALYSIS OF PROJECTS AFFECTING RISKS" SOUTHERN ECONOMIC JOURNAL, JULY 1991 VOL 58(1)

FROST AND HAGER (1987) : A GENERAL INTRODUCTION TO INSTITUTIONAL INVESTMENT" HEINEMANN, LONDON.

FWU KANG CHANG (1991) : "UNCERTAIN LIFETIMES, RETIREMENT AND ECONOMIC WELFARE" ECONOMICA, MAY 1991 VOL 58

GEARY D (1990): "RETIREMENT FUNDS AND ECONOMIC DEVELOPMENT - A MODEL FOR FINANCING ECONOMIC GROWTH IN SOUTH AFRICA". NICO TRUST, CAPE TOWN

GILBERTSON, B AND GOLDBERG, M : "THE MARKET MODEL AND THE JSE". IAJ NO 17, APRIL 1981

GIOVANNI A (1983) : " THE INTEREST ELASTICITY OF SAVINGS IN DEVELOPING COUNTRIES : THE EXISTING EVIDENCE " WORLD DEVELOPMENT 1983 ISSUE NOT GIVEN PP601 - 607

GOLDIN H.J (1986) : " INVESTOR POWER : SHAREHOLDER RIGHTS AND RESPONSIBLE SOCIAL INVESTING" VITAL SPEECHES, VOL 53, NO 5, PP156-158

GROSSMAN, BLAKE AND SHARPE ,WILLIAM : "FINANCIAL IMPLICATIONS OF SOUTH AFRICAN DIVESTMENT". FINANCIAL ANALYSTS JOURNAL, JULY/AUG. 1986, 15-29.

GRUAT JEAN VICTOR : "SOCIAL SECURITY SCHEMES IN AFRICA: CURRENT TRENDS AND PROBLEMS" INTERNATIONAL LABOUR REVIEW, VOL 129, NO 4, 1990

HAMILTON, SALLY; JO, HOJE AND STATMAN, MEIR : "DOING WELL WHILE DOING GOOD? THE INVESTMENT PERFORMANCE OF SOCIALLY RESPONSIBLE MUTUAL FUNDS". FINANCIAL ANALYSTS JOURNAL, NOV./DEC 1993, 62-66.

HARDIMAN M AND MIDGLEY J (1989) : "THE SOCIAL DIMENSIONS OF DEVELOPMENT, SOCIAL POLICY AND PLANNING IN THE 3RD WORLD" GOWER, 1989

HARRINGTON (DATE UNKNOWN) : MODERN PORTFOLIO THEORY , CHPT 1, MIMEO

HARTWIG T (1989) : NOTES ON NEW INVESTMENT REGULATIONS FOR LIFE OFFICES AND PENSION FUNDS. UNPUBLISHED PAPER, OLD MUTUAL, CAPE TOWN.

HARVARD BUSINESS REVIEW 1966-1980 (REPRINTS) : "PENSION MANAGEMENT" HBR 1980

HERREMANS, AKATHAPORN AND MCINNES (1993) : "AN INVESTIGATION OF CORPORATE SOCIAL RESPONSIBILITY REPUTATION AND ECONOMIC PERFORMANCE" ACCOUNTING ORGANISATION AND SOCIETY, VOL 18 (7/8) 1993 PP587-604

HEY AND FIOCCA (1991) : "INSURANCE AND SAVING" APPLIED FINANCIAL ECONOMICS, MARCH 1991 VOL 1(1)

HOKKIO AND RUSH (1991) : "IS THE BUDGET DEFICIT 'TOO LARGE'" ECONOMIC INQUIRY, JULY 1991

HOLDEN MEEHAN (1995) : HOLDEN MEEHAN GUIDE TO ETHICAL INVESTING, HTTP//WWW.BATH.AC.UK/CENTRES/ETHICAL/HOLDENMEEHAN.HTM

HOSKING S (1991) : "SOCIAL RATES OF RETURN TO INVESTMENT IN BLACK SCHOOLING" STUDIES IN ECONOMICS AND ECONOMETRICS, VOL 15(3) 1991

INNES R (1991) : "INVESTMENT AND GOVERNMENT INTERVENTION IN CREDIT MARKETS WHEN THERE IS ASYMMETRIC INFORMATION" JOURNAL OF PUBLIC ECONOMICS, DEC 1991 VOL 46(3)

IPPOLITO R.A : "PENSIONS, ECONOMICS AND PUBLIC POLICY" PUBLISHED FOR PENSIONS RESEARCH COUNCIL, WHARTON SCHOOL, UNIVERSITY OF PENNSYLVANIA. DOW JONES IRWIN 1986, PP 253 - 256.

IPPOLITO R.A : "THE IMPLICIT PENSION CONTRACT: DEVELOPMENTS AND NEW DIRECTIONS" JOURNAL OF HUMAN RESOURCES, 22, SUMMER 1987, PP 463 - 467.

JESSE R.I.K : "THE REVERSE YIELD GAP AND REAL RETURN". IAJ AUGUST 1977

JOHNSON C. F (1991) : "INTEREST RATES, DEFICITS AND TAX PROPOSALS" ECONOMIC INQUIRY, JAN 1991

KANTOR B (1993) : "THE FUTURE OF THE LARGE SA CORPORATION, AN ANALYSIS OF ECONOMIC STRUCTURE AND PERFORMANCE" UNPUBLISHED PAPER, UNIVERSITY OF CAPE TOWN

KERBEL P.A : "PORTFOLIO SELECTION AND THE S.A EXPERIENCE". IAJ, NO 5, DEC 1974

KILLICK T (1991) : " FINANCIAL MANAGEMENT AND ECONOMIC DEVELOPMENT: SOME ISSUES" SA JOURNAL OF ECONOMICS, SEPT 1991 VOL 59(3)

KIMBALL M.S (1990) : "PRECAUTIONARY SAVING IN THE SMALL AND IN THE LARGE" ECONOMETRICA 58, FALL 1990 PP 53 - 73

KOTLIKOFF L.G (1984) : "REFORMING SOCIAL SECURITY FOR THE YOUNG: A FRAMEWORK FOR CONSENSUS" IN CAMPBELL C (1984) "CONTROLLING THE COST OF SOCIAL SECURITY" AEI

LEE E.M (1986) : "AN INTRODUCTION TO PENSION SCHEMES" LONDON, CHAMELEON PRESS

LEIBOWITZ M " PENSION ASSET ALLOCATION THROUGH SURPLUS MANAGEMENT". FAJ, VOL 43, MARCH/APRIL 1987.

LEEMAN M (1992) : "SOCIALLY DESIRABLE INVESTMENTS, CONTRACTUAL SAVINGS INSTITUTIONS AND REDISTRIBUTION OF INCOME" PAPER DELIVERED AT THE ACTUARIAL SOCIETY OF SOUTH AFRICA CONVENTION

LEVY H AND SARNAT M (1984) : PORTFOLIO AND INVESTMENT SELECTION : THEORY AND PRACTICE. PRENTICE HALL, USA.

LOUFFI M : "DEVELOPMENT ISSUES AND STATE POLICIES IN SUBSAHARAN AFRICA". ILR, VOL 128, NO 2, 1989

MARKOWITZ H AND PEROLD A : PORTFOLIO ANALYSIS WITH FACTORS AND SCENARIOS. JOURNAL OF FINANCE, VOL 36, NO 14, SEPT 1981

MASIYE G.P.C : "A COMPARATIVE ANALYSIS OF HOUSING FINANCE POLICIES AND STRATEGIES: LESSONS FOR ZAMBIA" UNPUBLISHED MS THESIS, STIRLING UNIVERSITY 1988

MAYNARD C.E : " PENSION FUND INVESTMENT MANAGEMENT IN SA" UNPUBLISHED MBA PAPER, WITS, 1985

MCKENNA C : "THE ECONOMICS OF UNCERTAINTY" PP62-71, MIMEO

MCMILLAN H : "A PRINCIPAL - AGENT ANALYSIS OF PENSION POLICY" MANAGERIAL AND DECISION ECONOMICS VOL 8, NO 4 DEC 1987

MILLER HERBERT A.J.R (1988) : "RETIREMENT BENEFIT PLANS: AN INFORMATION SOURCEBOOK" ORYX PRESS

MOLL P. G (1991) : "THE EQUITY/GROWTH TRADE-OFF IN SA EDUCATION" STUDIES IN ECONOMICS AND ECONOMETRICS, VOL 15(1) 1991

MOUTON COMMITTEE : "DRAFT SITUATION ANALYSIS", CAPE TOWN, AUGUST 1989

MUNNELL A.H (1987) : "THE IMPACT OF PUBLIC AND PRIVATE PENSION SCHEMES ON SAVING AND CAPITAL FORMATION" IN CONJUGATING PUBLIC AND PRIVATE: THE CASE OF PENSIONS, PP 219 -236. INTERNATIONAL SOCIAL SECURITY ASSOC. ISSA PUBLICATIONS, SWITZERLAND

MUSGRAVE R.A (1983) :" A REAPPRAISAL OF SOCIAL SECURITY AND ITS FINANCING" PP 369 - 398 IN PUBLIC EXPENDITURE AND POLICY ANALYSIS EDITED BY HAVEMAN AND MARGOLIS. HOUGHTON MIFFLIN CO. BOSTON

NEW YORK FINANCIAL EXECUTIVES INSTITUTE, 1980 "PENSIONS"

NOREEN E : "THE ECONOMICS OF ETHICS : A NEW PERSPECTIVE ON AGENCY THEORY" ACCOUNTING ORGANISATIONS AND SOCIETY, 1988, PP359-369

RUDD, ANDREW : "SOCIAL RESPONSIBILITY AND PORTFOLIO PERFORMANCE". CALIFORNIA MANAGEMENT REVIEW, SUMMER 1981, VOL. 23 NO. 4, 55-61.

SCHOTLAND, ROY : "DIVERGENT INVESTING FOR PENSION FUNDS" . FINANCIAL ANALYSTS JOURNAL, SEPT./OCT. 1980, 29-38.

WAGNER, WAYNE , EMKIN ALLEN, AND DIXON, RICHARD : "SOUTH AFRICAN DIVESTMENT : THE INVESTMENT ISSUES ". FINANCIAL ANALYSTS JOURNAL, NOV./DEC 1984 , 14-22.

NICHOLSON C.R, LYSTER R.M AND KEELY A.M : "MANUAL ON SOCIAL PENSIONS IN SA" DURBAN, LEGAL RESOURCES CENTRE, 1987

OKUNADE A (1989) : "A COMMENT ON THE DETERMINANTS OF SAVING IN ETHIOPIA AND THE ROLE OF DEMOGRAPHIC VARIABLES" EASTERN AFRICAN ECONOMIC REVIEW, JUNE 1989 5(1) PP24 - 31

PARK G : "PENSIONS: AN ASSESSMENT - HOW THEY AFFECT BLACK PEOPLE IN SA" THE PROGRAMME, 1983

PENSIONS FUND ACT : ACT NO 24 OF 1956. JOHANNESBURG 1969.

PENSIONS MANAGEMENT, FEB 1991 : "WHISPERS OF PENSION MORTGAGES"

PENSIONS MANAGEMENT, FEB 1994 STATISTICS REVIEW

PILCH MICHAEL (1979) : "PENSION SCHEMES : A GUIDE TO PRINCIPLES AND PRACTICE" FARNBOROUGH, GOWER.

PLEASE S (1991) : "FINANCIAL RESOURCES FOR DEVELOPMENT" SA JOURNAL OF ECONOMICS, SEPT 1991 VOL 59(3)

PRIDAY J.M (1988) : "AN EVALUATION OF THE APPROPRIATENESS OF PENSION AND PROVIDENT FUNDS IN SA" UNPUBLISHED MBA PAPER UCT GRADUATE SCHOOL OF BUSINESS

QUADAGNO J : "THE TRANSFORMATION OF OLD AGE SECURITY: CLASS AND POLITICS IN THE AMERICAN WELFARE STATE." UNIV. OF CHICAGO PRESS, 1988, PP 229 - 246.

QUADAGNO J AND MEYER M.H : "ORGANISED LABOUR, STATE STRUCTURES AND SOCIAL POLICY DEVELOPMENT: A CASE STUDY IN OHIO" SOCIAL PROBLEMS, 36 APRIL 1989

RAZIN AND SADKA (1991) : "EFFICIENT INVESTMENT INCENTIVES IN THE PRESENCE OF CAPITAL FLIGHT" JOURNAL OF INTERNATIONAL ECONOMICS, AUG 1991 VOL 31(1/2)

REDDY P AND BRIJLAL P : THE ROLE OF PENSION FUNDS IN HOUSING FINANCE: THE SOUTH AFRICAN SCENARIO. DEVELOPMENT SOUTHERN AFRICA, VOL 9, NO2, MAY 1992

RIP COLIN M (1979) : "RETIREMENT: A SOCIOLOGICAL STUDY" PRETORIA, HSRC

RITTENBERG L (1991) : "INVESTMENT SPENDING AND INTEREST RATE POLICY - FINANCIAL LIBERATION IN TURKEY" JOURNAL OF DEVELOPMENT STUDIES, JAN 1991 VOL 27(2)

SANLAM (1989) : "PENSION BENEFITS IN SOUTH AFRICA" SANLAM SURVEY

SASS S.G (1968) : "SOCIAL INSURANCE AND VOLUNTARY HEALTH, WELFARE AND PENSIONS PROGRAMS IN ISRAEL" AMERICAN HISTADRUT CULTURAL EXCHANGE INSTITUTE

SHARPE W " "INTEGRATED ASSET ALLOCATION". FINANCIAL ANALYSTS JOURNAL, VOL 43, SEPT/OCT 1987

SIMIGIANNIS L : "EVALUATION OF PERFORMANCE OF A PRIVATELY ADMINISTERED PENSION FUND" UNPUBLISHED MBA PAPER, WITS, 1985

SKINNER J (1988) : " REAL INCOME, LIFECYCLE CONSUMPTION AND PRECAUTIONARY SAVING" JOURNAL OF MONETARY ECONOMICS, 22 PP 237-255

SMITH IAN (1980) : "OCCUPATIONAL PENSIONS" LONDON, SWEET AND MAXWELL.

STIGLITZ AND WEISS (1981) : "CREDIT RATIONING IN MARKETS WITH IMPERFECT INFORMATION" AMERICAN ECONOMIC REVIEW 71, 3 1981 PP393 - 410

STREBEL P.J : "LIMITED EFFICIENCY OF THE JSE". IAJ AUGUST 1977

SWIL S.R : "DETERMINATION OF PENSION SCHEME FUNDING RATES IN AN INFLATIONARY ECONOMY." UNPUBLISHED MBA PAPER, WITS, 1983

TESAR L (1991) : "SAVINGS, INVESTMENT AND INTERNATIONAL CAPITAL FLOWS" JOURNAL OF INTERNATIONAL ECONOMICS, AUG 1991 VOL 31(1/2)

VANCE S. C : "ARE SOCIALLY RESPONSIBLE CORPORATIONS GOOD INVESTMENT RISKS" MANAGEMENT REVIEW, AUGUST 1975, PP18-25

VAN HORNE J.C (1986): "FINANCIAL MANAGEMENT AND POLICY" 5th edition PRENTICE-HALL, NEW JERSEY

WASSENAAR A.D (1987) : "EN ROUTE TO FAIRYLAND" TAFELBERG, CAPE TOWN

WASSENAAR A.D (1989) :"SQUANDERED ASSETS" TAFELBERG, CAPE TOWN

WASSENAAR A.D : "THE GOVERNMENT SERVICE PENSION FUND: SOURCE OF SECURITY OR INSECURITY" UNPUBLISHED HONOURS PAPER, UCT 1989

WEIL D (1991) : "WHAT DETERMINES SAVING : A REVIEW ESSAY" JOURNAL OF MONETARY ECONOMICS, AUGUST 1991 VOL 28(1)

WILLIAMSON JOHN ET AL (1985) : "AGING AND PUBLIC POLICY. SOCIAL CONTROL OR SOCIAL JUSTICE." THOMAS CC

WISE DAVID (ED) (1985) : "PENSIONS, LABOUR AND INDIVIDUAL CHOICE" UNIVERSITY OF CHICAGO PRESS.

WOKUTCH R. E AND SPENCER B. A : "CORPORATE SAINTS AND SINNERS : THE EFFECTS OF PHILANTHROPIC AND ILLEGAL ACTIVITY ON ORGANISATIONAL PERFORMANCE" CALIFORNIA MANAGEMENT REVIEW, WINTER 1987, PP63-77

WOLFF NANCY : "INCOME REDISTRIBUTION AND THE SOCIAL SECURITY PROGRAM." UMI RES. PRESS, 1987, PP171 - 176.

YOUNG M AND BUCHANAN N (1981) : "ACCOUNTING FOR PENSIONS" CAMBRIDGE, WOODHEAD FAULKNER.

ZEVIN R (1996) : "REQUIRED RDP EXPENDITURES TO GENERATE ADEQUATE GROWTH OF EMPLOYMENT IN SOUTH AFRICA" GUEST SEMINAR, SCHOOL OF ECONOMICS, UNIVERSITY OF CAPE TOWN

INTERNET REFERENCES

CALVERT GROUP : http://www.calvertgroup.com

CITIZENS TRUST : http://www.efund.com

ETHICAL BUSINESS HOME PAGE : http://www.bath.ac.uk/Centres/Ethical

FIRST AFFIRMATIVE FINANCIAL NETWORK
:http://www.greenmoney.com/fafn/index.htm

FRANKLIN RESEARCH AND DEVELOPMENT : http://www.frdc.org

GREENMONEY JOURNAL : http://www.greenmoney.com

HOLDEN MEEHAN : http://www.bath.ac.uk/Centres/Ethical/HoldenMeehan

KINDER LYDENBERG AND DOMINI : KLD@aol.com

MUTUAL FUNDS ONLINE : http://www.mfmag.com

NATIONAL ASSOCIATION OF COMMUNITY DEVELOPMENT LOAN FUNDS :
NACDLF@aol.com

NATIONAL FEDERATION OF COMMUNITY DEVELOPMENT CREDIT UNIONS :
nfcdcu@pipeline.com

OUT OF THIS WORLD PROJECT : http://www.envirolink.org

SHARED INTEREST : http://www.oneworld.org/shared_int.htm

THE PEOPLES PROJECT : http://www.users.interport.net/~peoples/